



69670 MULTIBAND ANTENNA SYSTEM FOR TACTICAL AIRCRAFT

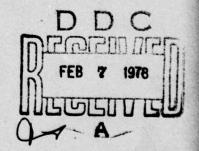
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The ability to extend the frequency range of a 100 MHz to 40 MHz antenna to include the 30 MHz to 100 MHz range was examined through analysis and testing. Antenna impedance, patterns, power handling and gain comparison measurements were made over the extended frequency range. The measurement were made on full scale as well as fifth and quarter scale models. Results show that it is possible to construct an antenna that will radiate from 30 MHz to 400 MHz effectively without the need of for active tuning. A single input connector

to the antenna is used.

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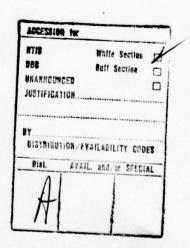
* A mechanical design study was performed to demonstrate the feasibility of locating this antenna in the vertical stabilizer of the F-4 and F-18 aircraft. In the case of the F-4, retrofit possibilities were investigated and a flyable fincap antenna was fabricated. The results of the mechanical study showed that it is feasible to use the antenna in the F-4 and F-18 as well as other Navy aircraft including the AV-8.

PREFACE

This report documents a design study performed by the McDonnell Aircraft
Company for a Multiband antenna covering the frequency range from 30 MHz to 400
MHz. This work was done for the Naval Air Development Center, Warminster, Pennsylvania under Contract N62269-77-0138 from November 1976 through August 1977. The
Navy Project Engineer was Mr. J. Miller, the MCAIR Principal Investigator was
F. W. Vortmeier.

The capability of an existing 100 MHz to 400 MHz antenna was extended to include the 30 MHz to 100 MHz frequency range. Size was minimized to make the antenna suitable for use on F-4, F-18, AV-8, and other Navy aircraft.

This report describes the work performed, the successful results obtained and the substantiating data. It includes a description of the configurations, impedance data, antenna patterns, power measurements, gain comparison measurements and mechanical design.



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1.0 INTRODUCTION

The requirement for a new VHF/UHF radio, suitable for close air support aircraft, involves the development of a companion, wide frequency range, three band, antenna system. The radio will have a single RF connector to cover all three frequency bands and will not have provisions for active antenna tuning. Development of an antenna to cover the 30 MHz to 400 MHz region without active tuning was a significant technical challenge in the development of the new radio and since the new VHF/UHF radio is to be used on all tactical Naval aircraft it is desirable to have an antenna system that can be installed on as many tactical Naval aircraft as possible.

1.1 Scope and Approach

The program consisted of tests supported by analysis to determine the effects of various changes to the basic antenna. Thirty one formal antenna configurations were tested and documented in the configuration log. Numerous informal variants of these configurations were also tried at various times that did not achieve significant progress in desired directions and did not warrant documentation. The extent of data taken on each configuration was often determined by results obtained; some configurations were only used for impedance measurements, others were used for antenna patterns and some were used for all measurements. The early configurations were used to explore the basic antenna and determine sensitivity to its various tuning components. A Test Configuration Sequence Block Diagram showing the sequence that was followed to obtain a final configuration is given in Figure 1 which shows the numerical configuration sequence of the modifications to the antenna. The heavy lines connect the configurations which led to a useful antenna. The light lines connect sequences which were used either to explore characteristics of the basic antenna or to explore techniques which proved to be unsatisfactory.

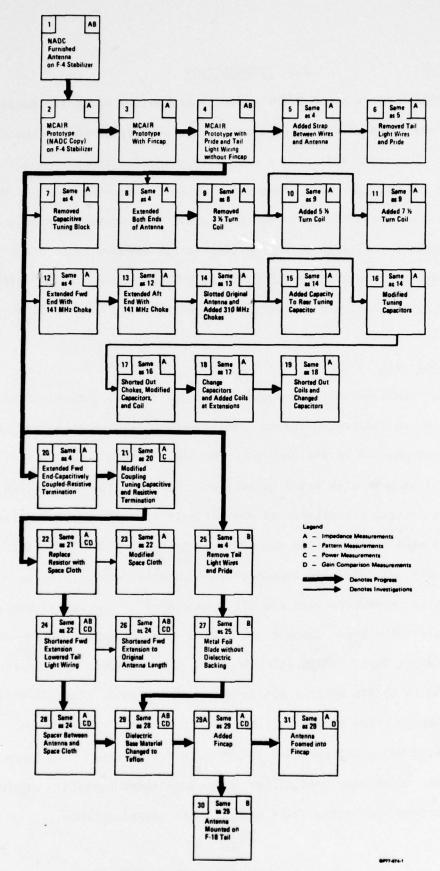


Figure 1 Test Configuration Sequence

A mechanical and structural design study was performed on the selected antenna configuration to ensure flightworthiness. Layouts and installation drawings were made to show how the antenna will be mounted in the F-4 and how it could be mounted in the F-18.

An antenna designed to meet the NADC requirements was fabricated and was foamed into a fincap provided by the Navy. The Multiband Fincap Antenna is considered flightworthy and suitable for a flight test program.

1.2 Work Performed

The test program consisted of three major tasks:

Task 1 - Full Scale F-4 Antenna Development, Design and Fabrication

Task 2 - Fifth Scale Model F-4 Antenna Radiation Pattern Test

Task 3 - Fourth Scale F-18 Antenna Pattern Investigation

A full scale model of the F-4 empennage and center fuselage section was installed atop a wooden antenna tower for the purpose of impedance testing. Tests were conducted to establish the performance of the existing 100 MHz to 400 MHz antenna and to determine the effects of modifying it to operate from 30 MHz to 100 MHz. A total of 28 configurations were tested on the full scale model.

Fifth-scale antenna patterns were measured with the antenna located on the vertical stabilizer of a fifth-scale model of the F-4. Measurements were made on the basic antenna and on configurations that showed promise during the impedance measuring phase of these tests. A complete set of radiation patterns was obtained with the final installed antenna design.

Fourth-scale antenna patterns were measured with the antenna located on the right vertical stabilizer of a fourth scale model of the F-18. These measurements consisted of a complete set of antenna patterns using the final antenna configuration that resulted from the F-4 tests.

1.3 Results

A multiband antenna was developed which is capable of operating over the required 30 MHz to 400 MHz range. The antenna is small enough to be suitable for mounting in the vertical fin of the F-4 or F-18 aircraft, the ventral fin of the AV-8 Harrier, and the vertical stabilizers or ventral fins of many other Navy aircraft. Tests of the F-4 installation show:

- o In Band 1 operation (30 MHz to 100 MHz) the antenna meets the requirements given in NADC Work Statement, 2041.
- o In Band 2 operation (100 MHz to 225 MHz) the antenna meets the requirements of the work statement and will perform equal to or better than a standard VHF antenna mounted in the same location.
- o In Band 3 operation (225 MHz to 400 MHz) the antenna meets the requirements of the work statement when mounted in a fincap equipped with Pride and will perform at least as well as a standard UHF antenna mounted in the same location.

Antenna pattern data measured on the right vertical fin of the twin tail F-18 shows some degradation due to shadowing by the second tail. However, the pattern data indicates that the antenna can be used installed in this location and that satisfactory operation can be expected under most flight conditions.

2.0 TECHNICAL DISCUSSION

An antenna capable of operating from 100 MHz to 400 MHz was provided by NADC. It was an AN-320 Tail Cap Antenna manufactured by Adams Russell.

A duplicate model of the NADC furnished antenna was constructed which became the MCAIR prototype and was used for all test purposes. All modifications required to obtain Band 1 operation were tested on the MCAIR prototype antenna.

For convenience of documentation the 30 MHz to 400 MHz frequency range was divided in three bands with their associated frequencies being as follows:

Band 1 - 30 MHz to 100 MHz

Band 2 - 100 MHz to 225 MHz

Band 3 - 225 MHz to 400 MHz

All testing was performed on two scale models of the F-4 aircraft and on a 1/4 scale model of the F-18. A sectional full scale model of the F-4 was used for impedance, gain comparison and power measurements while a complete 1/5 scale F-4 model and a 1/4 scale F-18 model were used for antenna pattern measurements.

The full scale model consisted of an actual F-4 empennage mounted to a wood and screen wire center fuselage section and located on a platform 45 feet above ground level. It extended from a point just aft of the rear cockpit (Fuselage Station 192), to the aft of the vertical stabilizer (Fuselage Station 671.75), and from the right wingfold line (Buttline 160) to the left wingfold line. This model is shown in Figures 2 and 3.

The 1/5 scale model of the F-4, made of metal and metalized fiberglass, was mounted to the head of the antenna positioner 22 feet high, as shown in Figure 4.

The 1/4 scale F-18 model was a metalized fiberglass model. The right vertical stabilizer was replaced with a 1/4 inch metal plate which was shaped like the stabilizer exact for the top 2 inches (full scale 8 inches) which were removed



Figure 2 F-4 Model on Antenna Test Tower

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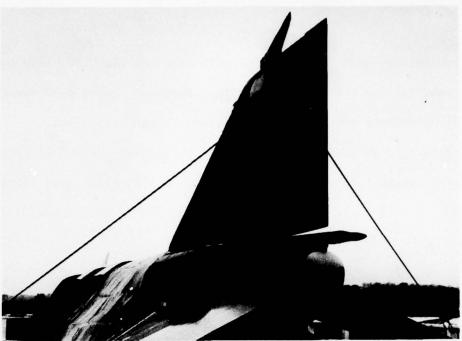


Figure 3 Antenna Model on Full Scale Mock UP



Figure 4 Fifth Scale F-4 Model

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to mount the scaled antenna. The antenna positioner and the test range were the same as were used for the F-4 pattern testing. Figures 5 and 6 show the F-18 model on the antenna positioner and the antenna located on the stabilizer.

All of the pertinent test data is reported in the text or in the Appendices to this report. During the tests measurements of various types were interspersed but for the purpose of this report each type of measurement is described in a separate sub-section.



Figure 5 Fourth Scale F-18 Model

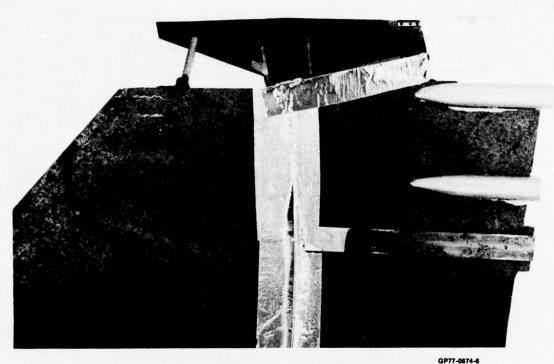


Figure 6 Multiband Antenna on Fourth Scale F-18 Stabilizer

2.1 Test Approach

Four types of tests were conducted during this design study. They are discussed below in the order in which they were largely conducted.

2.1.1 Impedance Measurements

The impedance measurements were recorded in the form of polaroid pictures of Smith Chart plots on two Network Analyzers. This provided a swept frequency plot over the entire frequency range of 30 to 400 MHz. Block diagrams of the two test setups are shown on Figures 7 and 8. The impedance measuring equipment and its operators were located inside of the aft fuselage model when the Smith Chart photographs were taken (see Figure 9). During the development of the antenna a closed circuit TV (CCTV) system was used to display the results of changes made to the antenna to the technical personnel responsible for changes. The TV camera was focused on the Smith Chart display in the model and the monitor was located outside the model within sight of the personnel standing at the base of the vertical fin.

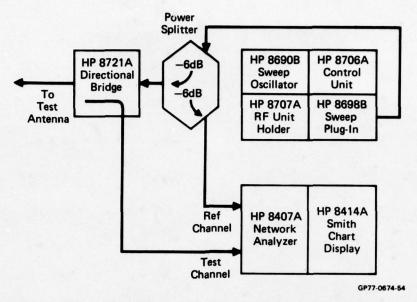


Figure 7 Frequency (30 to 100 MHz) Impedance Measurement Block Diagram

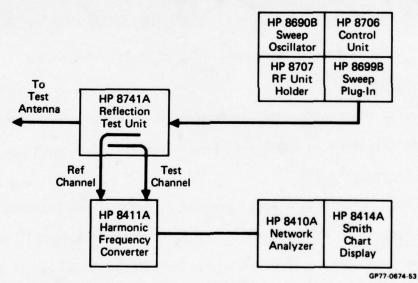


Figure 8 Swept Frequency (100 to 400 MHz) Impedance Measurement Block Diagram

2.1.2 Antenna Pattern Measurements

The polar antenna patterns were measured with the scale models mounted to the head of an antenna positioner 22 feet high. The test was conducted on a 285 foot long ground level range. The model antenna was excited using a laboratory signal generator. The receiving antenna was a broadband log-periodic connected to a Scientific Atlanta 1600 receiver. Development patterns were recorded in the

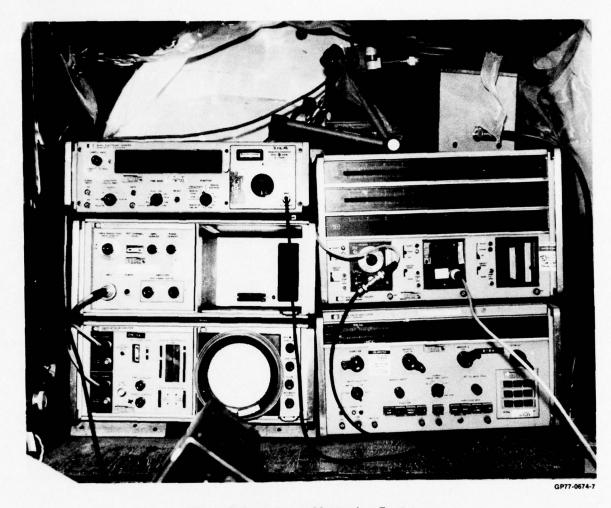
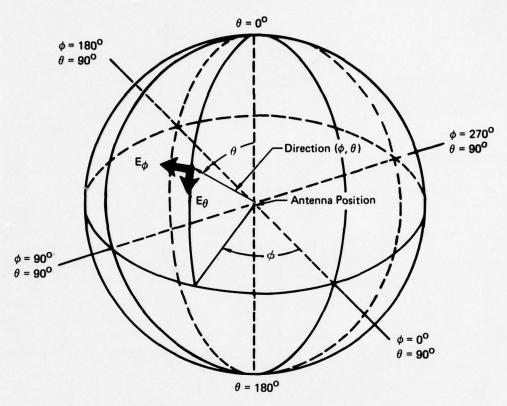


Figure 9 Impedance Measuring Equipment

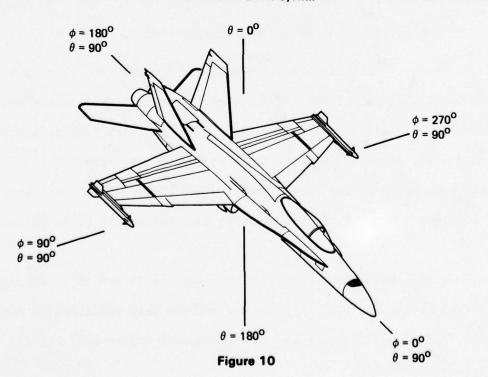
principal planes and at θ conical cuts at 60, 90, and 120 degrees. For each frequency, the E ϕ and E θ polarizations were measured. Test frequencies used during the F-4 pattern development test were 165, 380, 725, 1625 MHz which simulated full scale frequencies of 33, 76, 145 and 325 MHz. The frequencies were selected to provide patterns at the band edges of the VHF-FM band and mid band patterns for the VHF-AM band and UHF band while not interfering or being interfered with by local radio services.

Patterns were also recorded for final Configurations 29 and 30 at additional full scale frequencies of 42, 104, 174, 225 and 400 MHz with additional θ conical cuts of 30, 85, 95, 100 and 150 degrees. The coordinate system used for all pattern tests is shown in Figure 10.

Standard Antenna Coordinate System



Aircraft Coordinate System



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2.1.3 Power Measurements

Power measurements were conducted to determine the temperature rise in the space cloth material used in several configurations. These measurements were made by recording the ambient and space cloth temperatures 3 minutes after applying RF power. Due to RF amplifier frequency limits the power measurements could not be conducted higher than 220 MHz. The temperature was measured using a "Mini Mite" pyrometer with an iron-constantan thermocouple junction located at the hottest point on the space cloth. It was observed that cementing the junction on the space cloth did not affect the impedance unless the wires made direct contact with the cloth. A thin layer of cement was therefore placed between the junction and space cloth.

2.1.4 Gain Comparison Measurements

Full scale gain comparisons were made using the F-4 impedance model on the 45 foot platform. Two antennas, a VHF-AM blade (Collins P/N 522-1135-012) and a UHF blade (Transco P/N 11D29900-1) were used as VHF-AM and UHF gain standards. The blades were located on ground planes as well as on the turtleback of the F-4 model with the VHF-AM blade at F.S.288 and the UHF blade at F.S.372. These antennas can be seen in Figure 11. The blade antennas and fincap antenna on the model were excited one at a time with a constant signal from a laboratory signal generator. A receiving antenna and laboratory field intensity receiver were located either at a 1000 feet ground level range or 100 feet away from the model but 45 feet high at various ϕ angles near 90 degrees. The 100 foot measurements were done using a Pitman 50 foot fiberglass aerial bucket providing a co-altitude range. The signal level at the various ϕ angles was recorded at the receiver while using the fincap antenna and blade antennas alternately as transmitters. Dipole antennas located on the antenna tower were also connected to the signal generator and used for a gain comparison. Gain comparisons for the VHF-FM band were determined in a similar manner using 1/4 wavelength monopoles located on the F-4 turtleback as reference

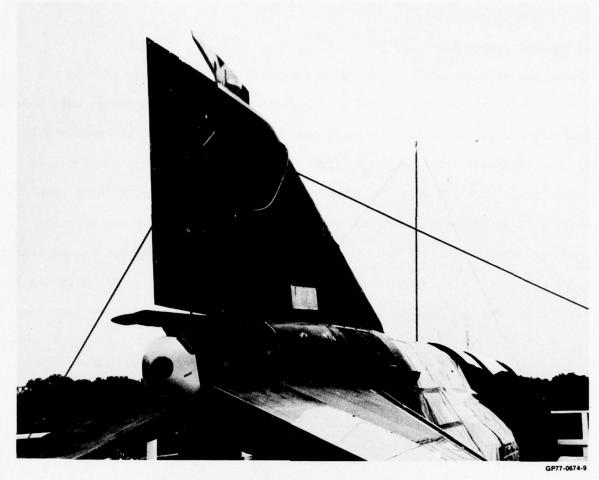


Figure 11 Standard Gain Antennas on F-4 Model

antennas. A second method was used to determine the gain of the fincap antenna using the standard range equation

$$W_{R} = \frac{W_{t}G_{t}G_{R}\lambda^{2}}{(4\pi R)^{2}}$$
 (1)

In logarithmic form, solving for the transmitting antenna gain, this becomes

$$g_t = P_R - P_t - g_r + L_s \tag{2}$$

where L_s = Space Loss = 20 log $\frac{4\pi R}{\lambda}$

Adding cable losses at the transmitting antenna (L_{TC}) receiving antenna (L_{RC}) and mismatch loss of the receiving antenna (L_{MR}) the equation becomes

$$g_t = P_R - P_T - g_r + L_s + L_{TC} + L_{RC} + L_{MR}$$
 (3)

The mismatch loss at the transmitting antenna was not considered since this was considered to be a characteristic of the antenna under test.

2.2 Impedance Measurements

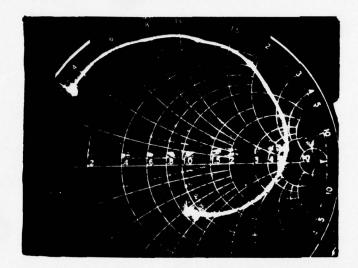
Impedance measurements were taken on 29 of the 31 configurations. Measurements were first made on the basic 100 MHz to 400 MHz antenna followed by exploratory measurements and variations on impedance matched antennas.

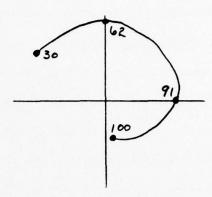
2.2.1 Basic Configuration

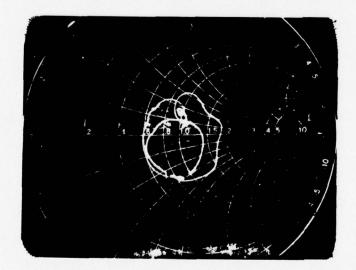
Once the basic antenna was built, impedance measurements were made on the NADC antenna and the unmodified MCAIR prototype to determine similarity. This data is shown in Figures 12 and 13 and it can be seen that the MCAIR antenna is representative of the NADC antenna. The impedance plots are practically overlays and show that both antennas are good in Bands 2 and 3, but are poor in Band 1. From this point on, the full scale NADC antenna was not used in the test program.

The sequence of events that went into the design of the multiband antenna is recorded in the Configuration Log, Appendix A with Configuration 1 representing the basic antenna as it was provided by NADC and Configuration 2 being the MCAIR duplicate. Both of these configurations were mounted on the vertical stabilizer of the F-4 without a fincap. The installation of the NADC antenna is shown in Figure 14. Configuration 3 added the fincap, which was found to have little effect on the installation. In Configuration 4 the Pride waveguide and tail light wiring were added with the fincap removed. This became the basic test configuration. The data for this configuration given in Figure 15 showed an appreciable change of impedance in Bands 2 and 3, raising the VSWR to 4:1.

It is desirable for the antenna to have a constant VSWR regardless of the surrounding structure. In an attempt to shield the antenna from various structures such as the tail light wires and waveguide and obtain a constant VSWR a grounded metal strip was placed between the antenna and the tail light wiring. The results of this change (Configuration 5) showed a further change in VSWR. The waveguide and tail light wires were removed in Configuration 6 and another considerable change







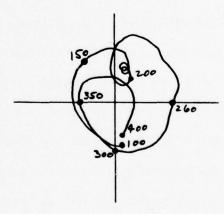
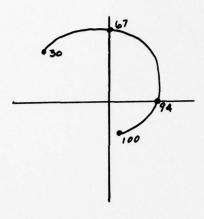
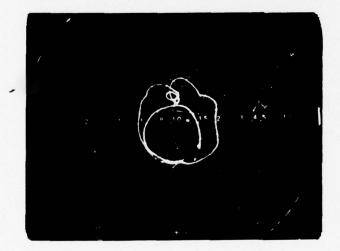


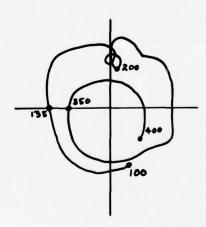
FIGURE 12
IMPEDANCE PLOTS OF NADC ANTENNA, CONFIGURATION 1

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Figure 13 Impedance Plots of MCAIR Prototype Antenna Configuration 2

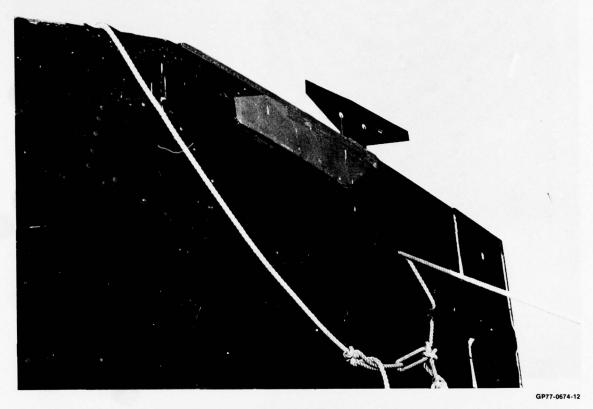
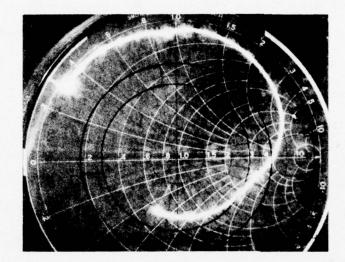
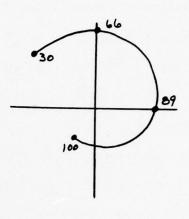


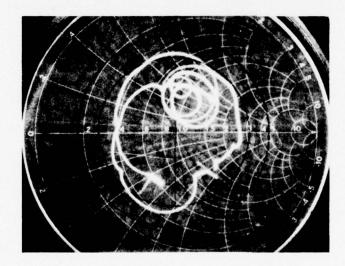
Figure 14 NADC Antenna on Full Scale Mockup

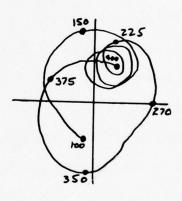
was noticed. Because of the continuing changes in the data, the use of a shielding strap was abandoned.

The basic antenna has a movable tuning block located near the antenna feedpoint. In order to determine the effect of this device it was first moved to its extreme positions and was then completely removed. Data taken with the block removed is recorded as Configuration 7. This test showed that a change in the block position primarily changes the phase of the signal. The tuning block was replaced and used for tuning as required during the test program.









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Figure 15 Impedance Plots Configuration 4

2.2.2 Exploratory Configuration

Since improvement was needed at the lower frequencies, it appeared that the antenna needed to be physically and electrically enlarged. This was done by extending both ends of the antenna using adhesive backed copper tape. The resulting change in impedance is noted in Configuration 8. For Band 1 the change was favorable, for Bands 2 and 3 it was detrimental.

As the next step the effect of an existing loading coil was investigated. The antenna was provided with a 3 1/2 turn, 1/2 inch diameter coil, attached to the radiating element near the antenna feed point and terminated to ground. This coil was removed with the resulting impedance data for this condition reported in Configuration 9. The most significant change noted was a large phase change for Band 1. Configurations 10 and 11 were devoted to trying 5 1/2 and 7 1/2 turn coils respectively. The impedance plots of these configurations indicate similar performance to Configuration 8. No significant change or improvement was obtained by changing the loading coil.

Up to this point in the study, none of the changes had improved antenna performance or even showed promise of improvement. Therefore, a different approach was explored which was to isolate the added-on sections of the antenna and connect them to the basic antenna with 1/4 wavelength coaxial chokes. In addition, the basic antenna was divided into three segments to provide operating segments for each of the three frequency bands. The idea behind the coaxial chokes was to make these segments appear as if they were connected or disconnected to each other depending upon the operating frequency. The resonant lengths of the chokes were 141 MHz and 310 MHz, the centers of operating Bands 2 and 3. The results of these tests are given in Configurations 12 through 16 and indicate that performance was degraded. It was concluded that the chokes were too narrow in bandwidth and therefore did not give the desired performance. This approach was therefore also abandoned.

In Configuration 17 three of the four chokes were shorted out by placing metal foil across the antenna segments and changes were made to the loading coil and the capacitive tuners. The results of this configuration once again were similar to those of Configuration 8 which indicated that the antenna needed to be enlarged for improvement of Band 1.

Configuration 18 segmented the extended sections of the antenna and connected them to the antenna by using five turn coils. This improved Band 1 performance, but degraded performance in Bands 2 and 3. In an attempt to improve Bands 2 and 3 the capacitive tuners were changed, which produced some improvement (see Configuration 19). Additional tuning was tried with the coils and increased capacitors but it was impossible to bring all three bands within the specification limits. The approach was therefore abandoned.

2.2.3 Impedance Matched Configurations

In Configuration 20 the coils connecting the prototype antenna to the extensions were removed. Also, the extension from the aft of the antenna was removed while the forward extension made as long as could physically be and still fit into the fincap. A 5/16 inch gap was left between the basic antenna and the extension and both were located on the same side of a printed circuit board.

A 5 inch long by 2 inch wide section of tape on the opposite side of the printed circuit board overlaps both the antenna and the extension, providing capacitive coupling. This configuration had good performance in Bands 2 and 3 and showed promise for Band 1. While experimenting, it was noticed that Band 1 could be made to meet specifications if resistance was added to the antenna extension. It was also noticed that the resistance had very little effect on Bands 2 and 3 operation. A 100 ohm resistor was added to the forward tip of Configuration 20 which then satisfied the impedance requirements of the NADC apecification for the total frequency band. This impedance data is given in Figure 16.

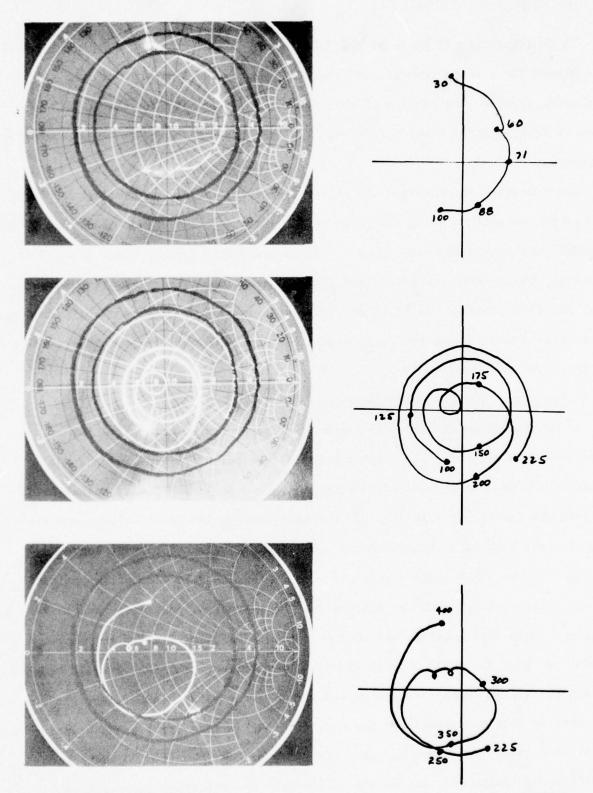


Figure 16 Impedance Plots Configuration 20

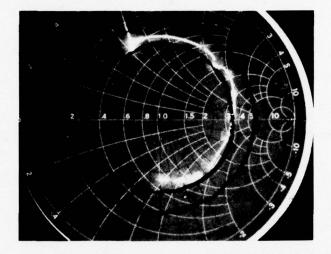
Further refinements to Configuration 20 were made by adjusting the capacitive tuning strips that are part of the basic antenna and by moving the extended section of the antenna to the opposite side of the printed circuit board with a 3 1/2 inch overlap over the basic antenna. The value of the resistor was also increased to 577 ohms. Additional experimentation permitted shortening the extension to about 17.5 inches beyond the basic antenna and replacing the resistor with a piece of SC 377 space cloth. This was done in Configurations 21 and 22. Configuration 22 impedance data, which meets the NADC specification, is shown in Figure 17. The overall length of the antenna was 43 inches and its height was 10 inches, which is suitable for mounting in the F-4 fincap. Figure 18 is a sketch of this antenna configuration.

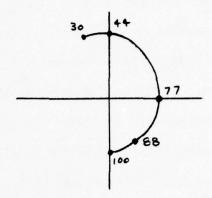
In order to analyze resistance characteristics for the space cloth the width of the piece used on the antenna was decreased from 4.9 inches to about 2.4 inches. This change increased the resistance of the space cloth and also improved the impedance in Band 1. In Bands 2 and 3 a phase shift was observed but there was no major change in the impedance. This became Configuration 23 which provided insight for resistance values used on additional configurations.

The tail light wiring was rerouted at this point of the program to improve antenna operation. It was determined from gain comparison measurement that the tail light wires located near the antenna caused a decrease in antenna gain. The wiring change improved the gain and had no effect on the impedance of the antenna.

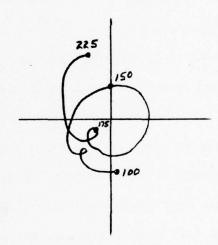
2.2.4 Antenna Size Reduction

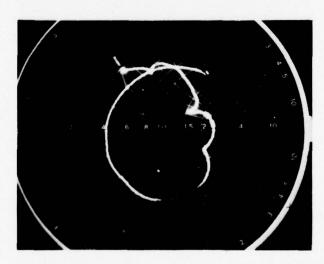
The antenna from Configuration 23 was too large to be used on the F-18 and the AV-8A. Testing was therefore continued for the purpose of decreasing the forward extension while maintaining the electrical characteristics of Configuration 23. This goal was achieved with Configuration 24. In this configuration the extension was triangular in shape which extended 9 inches beyond the basic antenna. The











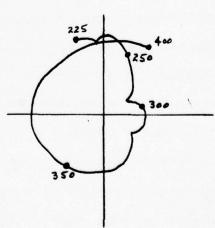
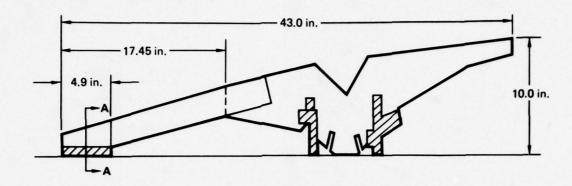


Figure 17 Impedance Plots Configuration 22

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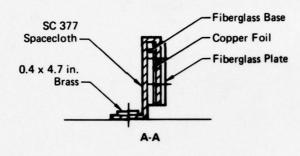


Figure 18 Multiband Antenna Configuration 22

impedance characteristics of this antenna, measured on the F-4 full scale mock-up, were excellent, and are shown in Figure 19. A sketch of Configuration 24 is given in Figure 20.

One further size reduction was attempted and is given as Configuration 26. For this antenna the extension was completely removed and a capacitively coupled strip was placed vertically across the forward end of the antenna. The strip was terminated to the base of the antenna through a 2 inch wide piece of SC-100 space cloth. The impedance of this configuration was good but overall antenna performance was not as good as that of Configuration 24.

Configuration 28 was similar to Configuration 24 except that the space cloth routing was slightly changed. A piece of Eccofoam was placed between the antenna extension and the space cloth. This was done to improve power handling of the space cloth, as will be explained in Section 2.3.

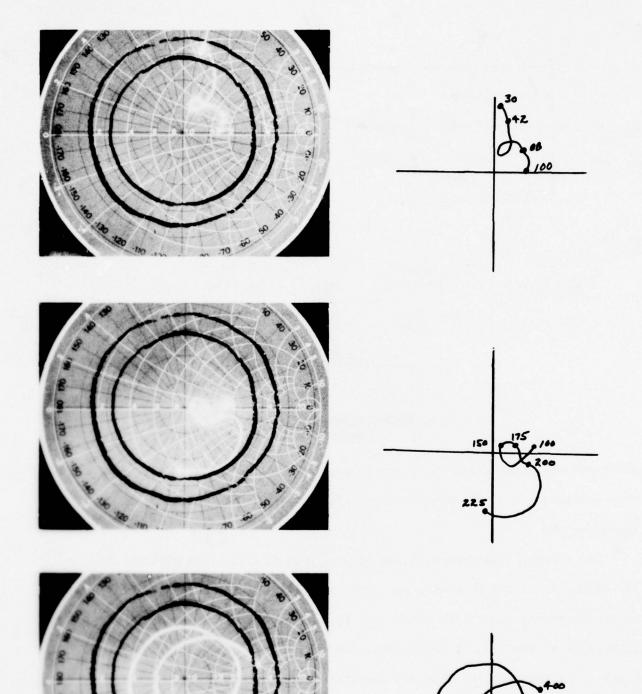
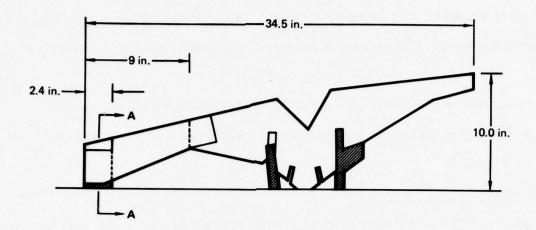


Figure 19 Impedance Plots Configuration 24

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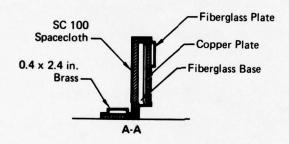


Figure 20 Multiband Antenna Configuration 24

2.2.5 Final Configuration

Configuration 29 was the final design. It is the same as Configuration 28 except that the fiberglass material of the printed circuit board is changed to Teflon. All previous configurations used an antenna layed up on a fiberglass board with a dielectric constant between 4 and 5. Configuration 29 used an etched Teflon board with a dielectric constant of 2.23. The aluminum support angles extended the full length of the antenna base and the forward end of the basic antenna was lengthened about 2 3/4 inches to adjust for differences in coupling capacity due to the change

to the Teflon support structure. The contact area of the SC-HT-377 space cloth was coated with Eccocoat CC-2 silver conductive paint to ensure good contact between the antenna and ground. The impedance data for this configuration is given in Figure 21.

As a final design check the above configuration was tested with an empty fincap placed over the antenna. The results of this impedance test Configuration 29A are shown in Figure 22.

2.2.6 Prototype Antenna in Fincap

Configuration 31 is the same as Configuration 29 except that the antenna has been mounted in a fincap and the fincap has been filled with low dielectric foam. The Pride simulation in Configuration 29 was not included in Configuration 31 since it was impractical to include the Pride installation in the fincap provided by NADC. The absence of the Pride installation is noticeable in the impedance data of Configuration 31 and is shown in Figure 23. This data shows that the antenna mounted in a fincap without the Pride installation does not meet the specification above 375 MHz. To demonstrate that the out-of-specification condition is caused by the absence of the Pride installation, metal foil was taped to the outside of the fincap in a location representative of the Pride wavegude. The results of this test are given in Configuration 31a, Figure 24. This data shows that the antenna with externally simulated Pride again meets the specification. Since the F-4B and J aircraft are equipped with Pride the antenna as designed is suitable for F-4 retrofit. All materials and processes used for their final assembly has been approved as being flightworthy.

2.3 Antenna Pattern Measurements

The antenna pattern testing required for the antenna development was conducted on the 1/5 scale F-4 model. The final configuration of the antenna was tested on both the 1/5 scale model of the F-4 and 1/4 scale model of the F-18. All of the

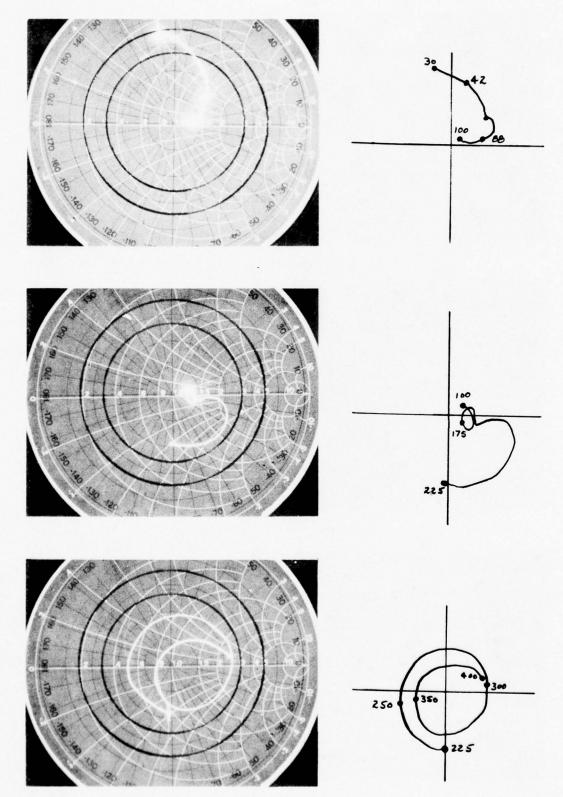


Figure 21 Impedance Plots Configuration 29

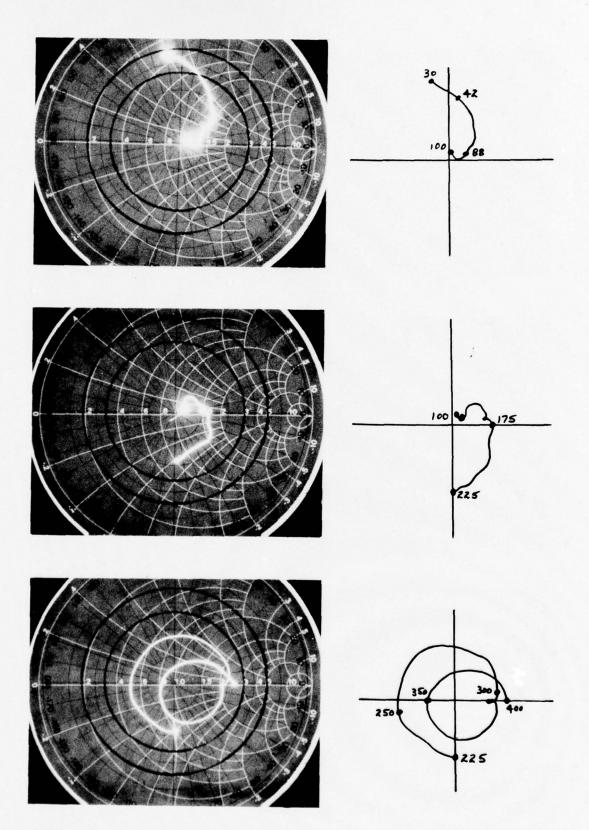


Figure 22 Impedance Plots Configuration 29A

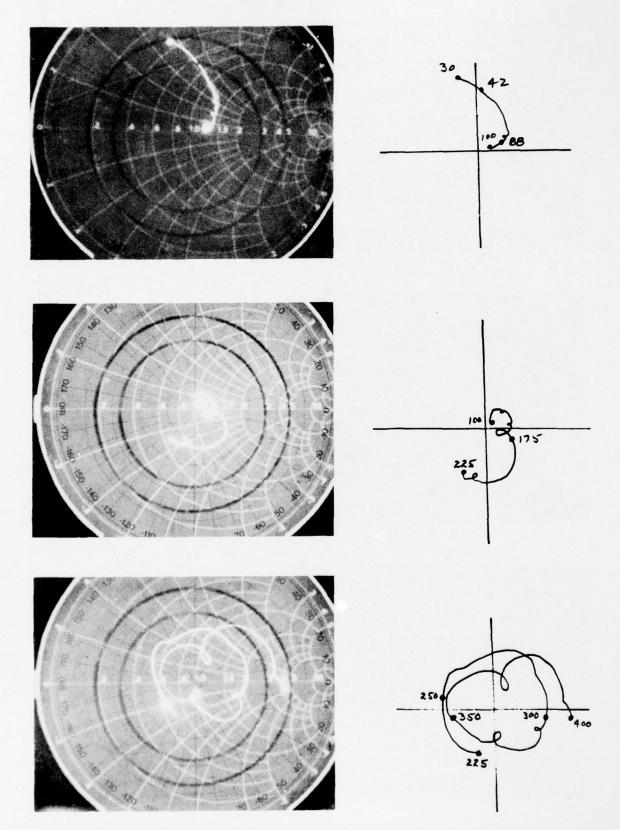


Figure 23 Impedance Plots of Final Antenna Foamed in Fin Cap
Configuration 31

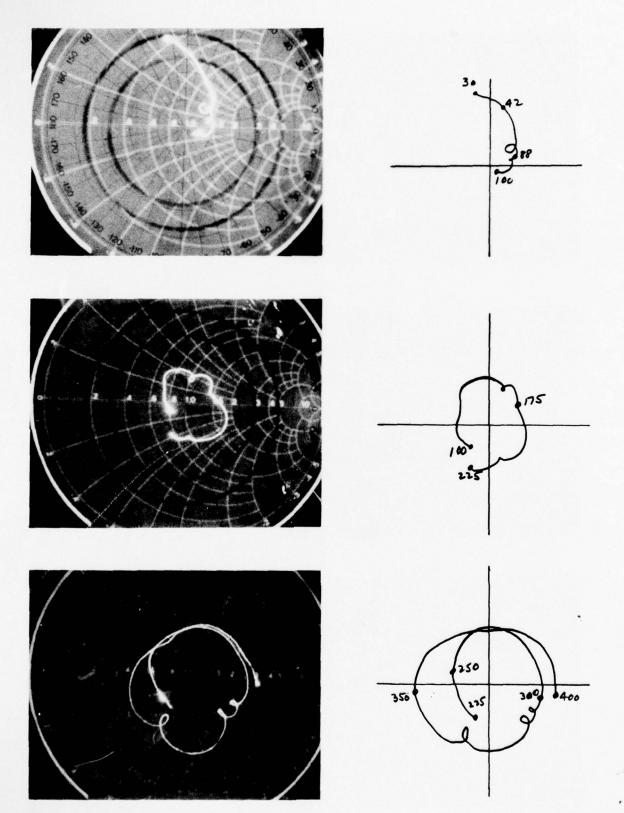


Figure 24 Impedance Plots of Fnal Antenna in Fincap with Simulated Waveguide Configuration 31A

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significant pattern data is included in this report (Appendix B for the F-4 and Appendix C for the F-18).

Limited testing was performed on the antenna provided by NADC in order to establish basic antenna patterns for the multiband antenna. Complete pattern sets were not measured until configurations were established which were potential candidates for the final antenna configuration.

2.3.1 F-4 Antenna Pattern Testing

A 1/5 scale model of the AN-320 Tail Cap Antenna was provided to MCAIR under the contract. This antenna was mounted on the vertical stabilizer of the F-4 and its pattern characteristics were measured in the UHF band (Band 3). This pattern data is shown in Appendix B, Configuration 1. The data obtained shows that the patterns are typical for a UHF antenna located on the vertical stabilizer of an F-4.

The tail light wiring and the Pride waveguide were modeled and added to the stabilizer. This is representative of Configuration 4 and was the second configuration used during pattern testing. In Band 3 of this configuration the patterns were very similar to the patterns previously measured in Configuration 1, which indicated no significant effect on scale model pattern due to the tail light and Pride waveguide.

In order to relate this data to data taken on another program during the initial Pride installation, Configuration 4 was compared to data from a UHF blade antenna mounted at the same location. The pattern characteristics of the two antennas were very similar showing that this antenna performs as well as a conventional blade in this location. A comparative sample of these antenna patterns is given in Figure 25.

Data was measured for Band 2 of Configuration 4 and also compared to Band 2 data taken on a different VHF antenna. Once again, the pattern characteristic of the two antennas were similar. Based on the measurements it is expected that the performance of the Multiband antenna will be equivalent to the performance of present UHF blades for Band 3 or to the performance of VHF blades for Band 2.

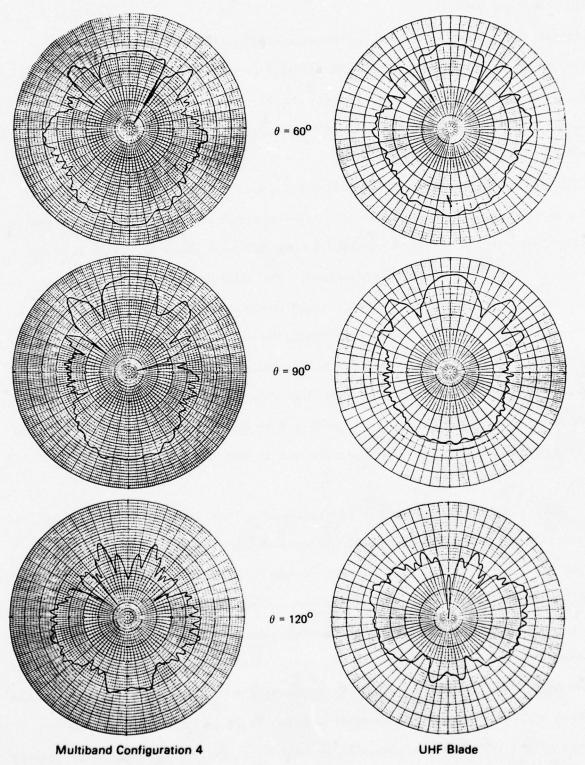


Figure 25 Antenna Pattern Comparisons

Band 1 patterns were measured on Configuration 4 even though this configuration was known to have a high impedance in this band. It was felt that the radiation characteristics of the antenna would be representative of patterns from any antenna installed on the stabilizer and would give a general indication of Band 1 performance from this location. These patterns are included in Appendix B.

Configuration 24 was the first configuration that was suitable in size and had impedance characteristics meeting the NADC specifications. Sufficient pattern data was measured on this configuration to show that the antenna would provide the required coverage. This data is included in Appendix B. Comparing data from Configuration 24 to available data of Configuration 4 shows that the antenna coverage is improved for Configuration 24 for all three operating bands. The antenna used for this test consisted of a MCAIR-made 1/5 scale model of the AN-320 antenna. This model was made to properly simulate the spacing between the capacitively coupled section of the antenna and the basic antenna. To properly simulate the capacitive coupling, the spacing had to be 0.010 inch.

Configuration 25 was used to determine the effect of moving the tail light wires down. The pattern data showed no change between this configuration and Configuration 4, even though gain measurements on the full scale model showed a change. Since pattern data did not show a degradation, the tail light wires were left in the lower position.

Configuration 26 patterns showed performance which was equivalent to

Configuration 4. However, this configuration was not explored in detail, since

power measurements indicated excessive heating in this configuration.

Exploratory measurements were made on Configuration 27 to determine the effect of the laminated fiberglass board. The configuration was the same as Configuration 25 except that the fiberglass board was removed and the antenna consisted of a freestanding metal foil. Pattern differences between Configurations 25 and 27 were

noticed when both were measured at the same frequency. The patterns could be made to look alike by slightly shifting the test frequency of Configuration 27. From this experiment it was concluded that the dielectric constant of the printed circuit board influenced antenna performance and should be controlled.

A Teflon base material with a dielectric constant of K=2.23 was selected for the next configuration. This material was available in various thicknesses and 1/5 and 1/4 scale model antenna could be made which were more representative of the full scale antenna.

Configuration 29 patterns represent the final antenna configuration for the F-4. Antenna patterns were measured at 9 frequencies. The principal planes plus 7 conic patterns were measured for E0 and E0 polarization. This data is included in Appendix B. Configuration 29 data shows that the antenna can provide coverage from 30 MHz to 400 MHz. Some nulls do exist in these patterns, but these would also be present if conventional narrow band blades were used. The multiband antenna, Configuration 29, provides coverage that is at least as good as that provided by standard blade antennas.

2.3.2 F-18 Antenna Pattern Testing

Antenna patterns were measured on a 1/4 scale F-18 with the antenna located on the right vertical stabilizer. This data is given as Configuration 30 and is included as Appendix C. The antenna used is identical to Configuration 29 used on the F-4. In order for the antenna to fit into the space available on the F-18, the antenna was turned 180 degrees and a 11 degree wedge was added at the rear. A sketch of this installation is shown in Figure 26. A review of the data shows that the second tail has an influence on the antenna patterns across the frequency band. However, the change is not consistent for all θ angles. While it may cause an additive effect at some elevation angles resulting in a large energy lobe, it subtracts at other elevation angles at the same azimuth angle causing a dip in the

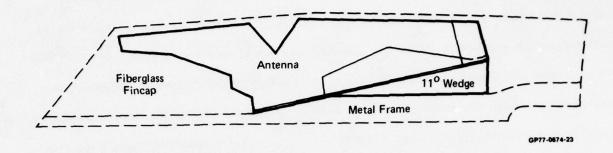


Figure 26 F-18 Fin Cap with Multiband Antenna

pattern or generates a large lobe 180 degrees away in azimuth. Most of the differences are seen at θ angles near or below the horizon. A typical example can be seen when comparing patterns at 42 MHz, Eθ polarization, with θ angles of 120 degrees and 150 degrees. Nulls of -15 dB are observed in these patterns. An additional effect noticed on the F-18 installation is that the forward coverage at higher frequencies is more solid than the aft coverage, while on the F-4 the reverse condition exists. A conclusion reached from this is that the resistive termination of the antenna tends to make the antenna slightly directive. A general conclusion drawn from the F-18 patterns is that although asymmetry exists in the radiation patterns the antenna appears to be useable for this installation if some degradation can be accepted. As an alternate, a second antenna could be installed in the left tail which would then provide excellent spatial coverage, but introduce switching complications. A small ventral fin containing the multiband antenna may also be an attractive alternative.

2.4 Power Measurements

In the MCAIR proposal for the Multiband Antenna, Report Number MDC A4408, Section 2.2.1, Task 1, it was stated that the power handling of the antenna would be determined by analysis. Once the antenna was developed and a configuration was found that met the impedance requirements of the NADC specification, however, it became apparent that power measurements should be made. The power measurements were desireable to determine the power dissipated in a resistor used to terminate the capacitive coupled extension of the antenna. High power tests were therefore conducted instead of analysis.

Configuration 21 was the first configuration subjected to high power testing. In this configuration a 2 watt, 570 ohm, carbon resistor was used to terminate the antenna extension. The antenna was connected to a 10 watt power source which was capable of operating from 30 MHz to 225 MHz. Maximum available CW output power was applied to the antenna for a period of 15 minutes. The resistor showed no evidence of failure although it did feel hot to the touch.

In Configuration 22 the resistor was replaced with a piece of SC-377 space cloth. This materal has a dc resistance of 377 ohms per square. However, because of the shape of the piece used in this installation the dc resistance of the space cloth was 80 ohms. The space cloth was attached to the end of the 20 inch antenna extension and was terminated to the antenna support structure. CW measurements were made across the frequency band using a 10 watt power source. A vacuum tube volt meter (VTVM) was used to monitor the voltage drop across the termination. The data is given in Table 1. During these measurements some heating of the space cloth was noticed, but the temperature did not appear to be excessive.

Table 1 Power Measurements
Configuration 22

Frequency (MHz)	Input Power (Watts)	Voltage Across Termination*
30	7.0	17
42	7.0	- 14
50	10.0	17
75	10.0	17
115	6.5	10
150	10.0	4
175	8.5	7
225	7.0	15

* Voltage Measured With VTVM

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Power testing was conducted on Configuration 24 in which the capacitively coupled extension was shortened to 9 inches. The space cloth configuration was therefore considerably longer since it was attached at a higher point on the antenna. The space cloth was changed to SC 100, but due to its shape had a dc resistance value of 300 ohms. Since power dissipation in the space cloth was of concern, additional instrumentation was used for this test. Thermocouples were attached to the space cloth at two places which had been determined to be hot spots. The thermocouples had no effect on the impedance of the antenna. The results of these tests are given in Table 2A and B.

Configuration 26 was given a power test and the results are shown in Table 3. Because of the shape of the capacitive extension a different space cloth arrangement was required. The space cloth was considerably smaller than was used for previous configurations. The thermocouple readings indicated high temperatures at the Band 1 frequencies. This made the configuration undesirable and it was rejected.

Based on the results of Configuration 24 two additional space cloth configurations were tried in an attempt to distribute the heat in the cloth more evenly. This data is recorded as Configuration 28 and is shown in Table 4. Here again, thermocouples were attached at the hottest spots on the cloth. It can be seen that when the space cloth is moved away from the surface of the antenna, with the spacing gradually increasing, the temperature rise on the cloth is relatively even and is a

minimum. However, for this particular configuration the possibility existed that the space cloth could be squeezed against the antenna when the antenna was foamed into the fincap. Therefore a low dielectric foam wedge made of Eccofoam PS was placed between the antenna and termination. The test was repeated and data recorded as Configuration 28B. A slight temperature increase was noticed which was within the specification limits of the space cloth. Configuration 28B was the most suitable arrangement found and became part of the final configuration.

Table 2 Power Measurements
Configuration 24

Table 2A - Thermocouple Located at Center of Space Cloth

Eroguanov (MHz)		Temperature at Termination (
Frequency (MHz)	Input Power (Watts)	Start Temp Ambient Temp = 77	End Temp
30	10		85
42	10		94
88	10		85
108	10		84
140	10		77
176	10		78
220	10		80
42	14		105

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Table 2B - Thermocouple Located 1/2 Inch from Bottom of Space Cloth

Francisco (MHz)		Temperature at Termination (F	
Frequency (MHz)	Input Power (Watts)	Start Temp	End Temp
30	10	Ambient	140
42	10	Temp = 85	203
88	10		153
108	10		185
140	10		114
176	10		87
220	10		135
42	14		235

Table 3 Power MeasurementsConfiguration 26

Francisco (MAN-)	Innua Danna (Missa)	Temperature at Termination	
Frequency (MHz)	Input Power (Watts)	Start Temp	End Temp
30	10	Ambient	158
42	10	Temp = 82	215
88	10		195
108	10		170
140	10		130
174	10		107
220	10		145

Table 4 Power Measurements
Configuration 28

Table 4A - Termination Pulled Away From Antenna, Configuration 28A

		Temperature at Termination (
Frequency (MHz)	Input Power (Watts)	Start Temp	End Temp
30	9.5	Ambient	110
42	11.0	Temp = 60 ⁰	99
88	10.5		125
108	10.0		108
140	14.0		75
174	14.0		61
220	11.5		82

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Table 4B - Triangular Dielectric Wedge Between Antenna and Termination, Configuration 28B

F (0411-1		Temperature at 1	rermination (F ^O)
rrequency (MHZ)	Input Power (Watts)	Start Temp	End Temp
30	11.0	Ambient	91
42	12.5	Temp = 65	100
88	12.0		147
108	13.0		125
140	16.0		113
174	16.0		83
220	13.0		85

A power test was run on Configuration 29 which is the final antenna design. This configuration is similar to Configuration 28B, the major difference being a change from the fiberglass printed circuit board to a Teflon printed circuit board. Other changes were described in Section 3.1 of this report. In addition to previously described changes, a low dielectric wedge made of high temperature Eccofoam SH was placed between the antenna and the space cloth. The power measurements for Configuration 29 were taken inside of a fincap thereby stabilizing the ambient air surrounding the antenna. Table 5 shows the measured data for this configuration. The data shows that the temperature rise for this configuration was the smallest of all configurations tested while the input power was increased to as high as 17 watts at some of the test frequencies.

Table 5 Power MeasurementsConfiguration 29

E (884-)		Temperature at T	ermination (F ^O)
Frequency (MHz)	Input Power (Watts)	Start Temp Ambient Temp = 110 ⁰	End Temp
30	15.0	Ambient	136
42	13.0	Temp = 110 ⁰	145
88	13.0		160
108	13.0		144
140	17.0		123
174	17.0		120
220	12.5		133
30	15.0		133

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2.5 Gain Comparison Measurments

Gain comparison measurements were made on significantly changed configurations beginning with Configuration 22. Since it was difficult to obtain data for gain comparisons, particularly at the lower frequencies, a number of different methods were used for the gain comparison.

Initially, standard dipoles tuned to the test frequency were used in a substitution method. The dipoles were located on the roof of the antenna tower.

The fincap and the dipole sequentially transmitted to a receiving station located 1000 feet away. The receive station could be moved about the antenna tower. This was done for Configuration 22, with data being taken at two locations. Data measured over the frequency band (Table 6) showed lower than expected gain in Bands 2 and 3. Therefore, additional data was taken at a fixed frequency in Band 3 (325 MHz) using a Transco UHF blade mounted on a 30 inch ground plane as a standard. This antenna was also located on the roof of the antenna tower. Various changes were made to the aircraft model in the vicinity of the antenna and the effects were recorded (Table 7). The conclusion reached from analyzing the data was that the tail light

Table 6 Gain Comparison Measurements
Configuration 22

Frequency (MHz)	Reference Level (dB) (Dipole)	Fincap Antenna (dB) At ϕ = 173 ⁰	Fincap Antenna (dB) At $\phi = 80^{\circ}$
30	0	-15	-23
40	0	-13	-11
76	0	-11	-15
115	0	-4	-10
140	0	-7	-4
175	0	+9	-4
225	0	-8	-6
325	0	-7	-11
400	0	0	-18

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Portable Receiver at Ground Level Range = 1000 Feet at $\phi = 173^{\circ}$

 $= 500 \text{ Feet at } \phi = 80^{\circ}$

wiring was affecting performance and had to be relocated. All subsequent data was taken with the tail light wiring located away from the antenna routed along the Pride waveguide.

Configuration 24 was checked in Bands 2 and 3 using standard blade antennas for the gain reference. The blade antennas were mounted on a 30 inch horizontal ground plane. Data on this configuration (Table 8) shows that the antenna was comparable to standard blade antennas.

Table 7 Fixed Frequency Gain Comparison Test Configuration 22

Test Sequence	Test Description	Relative Power Level at Fincap (dB)
1	MCAIR Antenna with Tail Light Wire and Waveguide	-18
2	MCAIR Antenna without Tail Light Wire and Waveguide	-7
3	Transco Antenna on Tail Structure	-6
4	Transco Antenna with Tail Light Wire and Waveguide	-3
5	NADC Antenna without Tail Light Wire and Waveguide	-6
6	NADC Antenna with Tail Light Wire and Waveguide	-9
7	Same as 6 - Wire Assembly Shifted ½ Inch Toward Antenna	-9
8	Repeat of 7 after Considerable Time Delay	-8
9	NADC Antenna with Wire and Waveguide Covered with Foil	-8
10	MCAIR Antenna with Wire and Waveguide Covered with Foil	-12
11	MCAIR Antenna with Wire and Waveguide - Foil Removed	-14
12	MCAIR Antenna with Tail Light Wire Relocated	-10

Receiver at 1000 Feet $\phi = 170^{\circ}$

Frequency 325 MHz

Transco UHF Blade used as Reference on 30 Inch Ground Plane

Table 8 Gain Comparison Measurements Configuration 24

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Frequency (MHz)	Reference Standard Anteni		Fincap Antenna (dB)
110	Collins Blade	70	+3
135	Used As	>0	+3
175	Standard	10	+17
225	Transco Blade	70	-3
325	Used As	>0	+4
400	Standard	J 0	-3

Portable Receiver at Ground Level

Range = 1000 Feet ϕ = 173°

*Standards Mounted on 30 Inch Ground Plane

In Configuration 26 gain measurements were made using the fincap antenna, conventional blades for Bands 2 and 3, and dipoles tuned to the test frequency for all bands. The conventional blades were mounted on a 30 inch ground plane for the first set of data. The conventional blades were then mounted on the turtleback of the aircraft and the Bands 2 and 3 measurements were repeated. Measurement on the back of the aircraft were made with the receiver at two locations ϕ = 173 degrees

and ϕ = 135 degrees (Tables 9A and B). Differences between these two data sets led us to locate the receiving station in a Pitman 50 foot aerial fiberglass bucket used at a range of 100 feet. This was done to eliminate ground range effects.

With this configuration, additional data was taken at four points around the aircraft model. This data (Table 9C) agrees with data points on antenna patterns when comparing pattern of an antenna located on the fincap to patterns of an antenna located on the turtleback of the F-4. Such a comparison at similar frequencies is shown in Figure 27. The turtleback pattern data was taken for an antenna located at Fuselage Station 380 and Right Butt Line 13.50 which is a location similar to that used for this test. These two patterns do not have the same scale factors, but it can be seen that the tail mounted antenna suffers more gain loss at broadside than the turtleback antenna. Comparing the equivalent pattern of this study to the turtleback antenna of Figure 25, therefore, shows good agreement between antenna gains at various azimuth angles.

Gain comparison measurements were made on Configuration 28, using the Pitman 50 foot aerial fiberglass bucket at a range of 100 feet for the receiving site. Configuration 28 was similar to Configuration 24 except that a dielectric block was added between the antenna and the space cloth. The antennas were compared to tuned dipoles across the frequency band, and to blade antennas in Bands 2 and 3. Because of large variations in the low band measurements (Table 10) the receiver was taken to ground level at 1000 feet range and additional data was taken. As part of this test the standard dipole was located in several positions which caused the value of the references level to vary by more than 15 dB. This made the data taken at the lower frequencies questionable.

For Configuration 29, which represents the final configuration, a set of monopoles were constructed, tuned to the lower test frequencies. They were mounted on the back of the aircraft, one at a time, as can be seen in Figure 11. This was

Table 9 Gain Comparison Measurements Configuration 26

Table 9A

Frequency (MHz)	Reference Level (dB)	Blade Antenna* (dB)	Fincap Antenna (dB)
30	0	_ ;	-14
40	0	<u> </u>	-14
76	0	<u> -</u>	-14
110	0	-11	-4
135	0	-2	-1
150	0	+3	+2
175	0	-13	+6
225	0	+4	+3
325	0	0	-14
400	0	0	-1
315	0		-3
350	0		+5

Portable Receiver at Ground Level Range = 1000 Feet, ϕ = 173 $^{\circ}$

*Blades Mounted on 30 Inch Ground Plane

Dipole used as Reference

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Table 9B

		Fincap Antenna (dB)	
Frequency (MHz)	Reference Level (dB)	φ = 173 ⁰	φ = 135 ⁰
110	0		-1
140	0	-1	+18
150	0	+2	-1
175	0	+25	+15
225	0	0	-7
315	0	-3	-4
325	0	-10	-10
335	0	+2	-6
400	0	-1	+5

Portable Receiver at Ground Level

Range = 1000 Feet

Blades mounted on Turtle Back Used as Reference

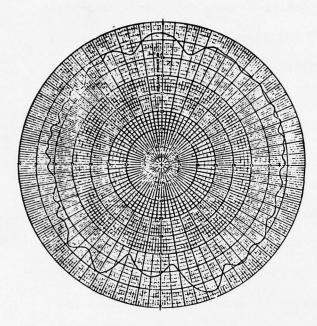
GP77-0674-36

Frequency (MHz)	Reference Antenna (Standard Blades)*	$\theta = 92.5^{\circ}$ $\phi = 173^{\circ}$	$\theta = 92.5^{\circ}$ $\phi = 135^{\circ}$	$\theta = 92.5^{\circ}$ $\phi = 90^{\circ}$	$\theta = 92.5^{\circ}$ $\phi = 270^{\circ}$
110	0	-1	-3	+1	-8
140	0	+3	-6	-12	-25
150	0	+3	-5	-6	-13
175	0	+18	+26	+14	+14
225	0	+1	0	-3	-2
315	0	-2	-3	-16	-13
325	0	0	-4	-7	-13
335	0	+1	+2	-12	8
400	0	+8	0	-17	-10

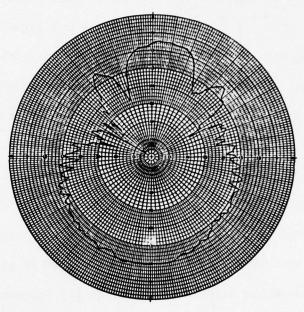
Portable Receiver in Pittman Bucket

Range = 100 Feet

Height = 50 Feet (Same as Model Antenna) Blades Mounted on Turtleback of Aircraft



Standard UHF Communication Antenna on F-4 Turtle Back



GP77-0674-24 Multiband Antenna on F-4 Vertical Stabilizer

Figure 27 Antenna Pattern Comparison

Table 10 Gain Comparison Measurements Configuration 28

Francisco (MH-)	Reference	φ=	90°	φ =	135 ⁰	φ = 180°		
Frequency (MHz)	Dipole	Blade	Fincap	Blade	Fincap	Blade	Fincap	
30	0	_	-27	-	-14	_	-20	
42	0	-	-15	-	-14	-	-15	
88	0	-	-19	-	-14	-	-10	
110	0	0	9	-7	-6	-2	-1	
135	0	+4	-3	-4	-7	-4	+3	
150	0	-1	-19	-4	-9	-9	-1	
175	0	-18	-3	-26	-4	-26	-5	
225	0	-6	-9	0	+2	-8	-5	
325	0	0	-5	-24	-16	-12	-11	
400	0	0	-10	-4	-3	-14	-2	

Portable Receiver in Pittman Bucket

Range = 100 Feet Height = 50 Feet

Dipole Used as Reference **Blades Mounted on Turtleback**

done to minimize the effects of surrounding structures. Data for this configuration is given in Table 11. This data was taken with the fincap placed over the prototype antenna. All of the data indicates that the signal level at the antenna is better than -20 dBi in Band 1. Band 2 and Band 3 data indicates that the antenna is equivalent to or better than individual standard blades if mounted in the same location.

To resolve the uncertainties of the data at the lower frequencies, an additional Band 1 test was done. This consisted of determining the antenna gain based on the range equation with all parameters known except the transmit antenna gain. This was done at four frequencies and the data is given in Table 12. These measurements were made at an azimuth angle of ϕ = 135 degrees. Using the obtained power levels and spotting them on the appropriate antenna pattern θ = 90 degrees at θ = 135 degrees establishes a power level for the pattern. Based on this level, the average antenna gain in the horizontal plane with readings taken every 10 degrees is -19.42 dBi

Table 11 Gain Comparison Measurements
Configuration 29

- /****	Monopole		Fincap (dB)				
Frequency (MHz)	or Blade (dB)	φ = 90 °	φ = 135 ⁰	φ = 180 ⁰			
30	0	-8	-17	-20			
42	0	-18	-16	-13			
88	0	-15	-7	+5			
110	0	-2	-1	+3			
135	0	-10	0	+6			
150	0	-11	+1	+8			
175	0	+17	+20	+25			
225	0	-5	+4	+3			
325	0	7	-6	+7			
400	0	-8	+3	+13			

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Portable Receiver in Pittman Bucket

Range = 100 Feet

Height = 50 Feet

Monopoles and Blades Mounted on Turtleback

Table 12 Antenna Gain Determination
Configuration 29A

(All Values in dB)	30 MHz	42 MHz	76 MHz	88 MHz
Power Received (PR)	-18	-23	-15	-13
Transmitter Power (PT)	37	37	34.8	34.8
Receive Antenna Gain (GR)	2.14	2.14	2.14	2.14
Space Loss (LS)	33.67	36.6	41.79	43.02
Transmission Cable Loss (LTC)	1.1	1.0	1.0	1.0
Receive Cable Loss (LRC)	0.3	0.3	0.4	0.4
Receive Antenna Mismatch Loss (LMR)	1.9	3.1	8.0	0.4
Transmit Antenna Gain (G _T)	-20.17	-21.14	-7.95	-5.12

 $G_T = P_R - P_T - G_R + L_S + L_{TC} + L_{RC} + L_{MR}$

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for 30 MHz and -19.8 dBi for 42 MHz. The maximum/minimum gains for 30 MHz are -16.95 dBi/-20.95 dBi and for 42 MHz -17.4 dBi/-22.7 dBi.

The general conclusion reached from the various gain comparison measurements is that the antenna will function very well as Bands 2 and 3 and can meet the specification requirement for Band 1.

2.6 Mechanical Design and Construction

A mechanical and structural design analysis was performed on the final configuration, Configuration 29. The various materials used in the antenna and the processes used for assembly were investigated and substitutions made to arrive at a flightworthy antenna. Layout drawings of the antenna were made showing all of the detail parts.

2.6.1 F-4 Installation

An installation drawing was prepared to show the antenna installation on the vertical fin of the F-4. This drawing gives the details for modifying an existing fincap to incorporate the multiband antenna, including the removal of existing foam from the fincap and the process for installing and securing the antenna into the fincap using foam. The drawings were used for final assembly of the multiband, fincap antenna.

The fincap to be modified was provided by NADC. During the fabrication process a problem was encountered which had not been anticipated. In order to install the antenna into the fincap a rib at the base of the fincap had to be removed. This rib is attached to the fincap with 100 rivets. Once these were removed it was found that additional hardware attached to the rib, such as alignment pins, were embedded in the foam and held the rib in place. These pins made it impossible to remove the rib in a useable condition. A second rib was therefore needed which was carefully removed from another fincap. This was done by sawing off the fiberglass fincap above the height of the rib. The rib was then placed in the original fincap and it was found that all of the attaching screw holes were in alignment, but only 30 percent of the rivet holes would align. Consequently this second rib was unuseable. A blank rib was required which was ordered from the manufacturer by NADC and was provided to MCAIR.

The foaming process was planned so that the final antenna/fincap assembly would be as strong as previous fincaps without the antenna. All existing foam and ribs in the area of the antenna were removed from the fincap and the antenna was coated with an EPON 828 epoxy to ensure a good bond of the foam to the antenna. With the fincap located in a restraining fixture, the foam was injected with two nozzles, one located on each side of the antenna. This provided equal amounts of foam to each side of the antenna, thus preventing the antenna from shifting within the fincap. The foam was cured at high temperature to provide maximum assembly strength.

During this operation, a problem was encountered (as determined from electrical tests) due to the pressure exerted by the foam on the antenna loading coil. The coil was forced against the antenna feed point thereby shorting out the antenna and preventing electrical operation. This failure was corrected by boring a small hole near the coil, removing the foam locally and providing a Teflon insulator

between the coil and the antenna feed. The local area was then refoamed, and a fiberglass cover was riveted over the hole in the fincap. Electrical tests showed the antenna to be operating satisfactorily as reported in Section 2.2.6 of this report.

The weight of the fincap with the multiband antenna is 14.5 pounds.

2.6.2 F-18 Installation

A second installation drawing was prepared to show how the antenna can be located in a vertical fin of the F-18. To make the antenna fit into the available space, it was necessary to rotate it by 180 degrees and tilt its forward end down by 11 degrees. From electrical testing it was determined that an 11 degree metallic wedge was needed between the antenna base and top side of the vertical stabilizer to give continuity. The F-18 installation also required an offset from the centerline of the fin for the rear portion of the antenna and a reduction in the width of the antenna mounting flange to allow it to fit within the existing dimensions of the fincap. These changes are insignificant and do not affect electrical performance. The antenna is sandwiched between honeycomb sections which are made to accept the antenna contour.

3.0 CONCLUSIONS

The results of this development program have shown that it is possible to build an antenna that is capable of operating from 30 MHz to 400 MHz with an impedance match of less than 3 to 1 from 42 MHz to 400 MHz and less than 5 to 1 from 30 MHz to 42 MHz. The antenna can be made small enough to make it suitable for use on most Navy aircraft including the F-4, F-18, AV-8, F-14, A-6, and A-7. The antenna can be used with either end being forward in a fincap or a ventral fin without affecting its performance. Antenna pattern data showed that the antenna has performance which is equal to or better than the performance obtained from conventional narrow band blades in the 100 MHz to 400 MHz region. Coverage in the 30 MHz to 100 MHz band is omnidirectional with the signal strength near the horizon being between -16 dBi and -20 dBi. The antenna is capable of operating at power levels higher than 15 watts cw for extended periods of time.

The antenna is suitable for retrofit into the F-4 vertical stabilizer fincap. The retrofit requires considerable rework of the fincap including removal of all foam and replacement of the metal structural rib.

The antenna is suitable for use on the F-18 aircraft. The antenna is installed by reversing the antenna and tilting it 11 degrees forward to make it compatible with the mold line of either vertical stabilizer.

4.0 RECOMMENDATIONS FOR FUTURE INVESTIGATIONS

The results of this contract have established the capability of constructing an antenna that will operate from 30 MHz to 400 MHz. However, there are several aspects of the antenna/fincap or antenna/ventral assembly that warrant further investigations. These are:

- o Add the necessary matching to the antenna to make it independent of Pride or other devices.
- o Perform trade studies to determine cost of retrofit versus replacement of fincap/ventral fin for each particular installation.
- o Investigate all materials used in antenna to arrive at an optimum material selection.
- o Investigate the possibility of providing L-Band performance within the envelope of the Multiband antenna.

APPENDIX A

CONFIGURATION LOG

		TEST CONFIGURATION LOG	
PROGRAM		F4B/J FINCAP ANTENNA 703-174	SHEET 1 OF 12
DATE	NUMBER	CONFIGURATION DESCRIPTION	PATTERNS MADE
1/26/77	1	Navy Antenna w/o Fincap or Pride Wiring	Z 30-400 MC.
1/26/77	2	MAC Prototype w/o Fincap or Pride Wiring	Z 30-400 MC.
1/27/17	3	MAC Prototype with Fincap but no Pride Wiring	Z 30-400 MC.
2/1	4	MAC Prototype with tail light wiring and Pride Waveguide/ Horn mocked up. 1/5 scale antenna is NADC supplied.	Z 30-400 MC. 1/5 scale;76,145, 325, MC.
2/1	5	MAC Proto. same as Conf. 4 except added group strap under aft edge of Ant. along lite wire tubing	Z 30-400 MC.
2/1	9	MAC Proto. same as Conf. 5 except w/o Pride or Lite wiring	Z 30-400 MC.
2/1	7	MAC Proto. same as Conf. 4 except removed Tuning capacitor block from antenna.	Z 30-400 MC.

SHEET 3 OF 12	PATTERNS MADE	Z 30-400 MC	Z 30-400 MC	Z 30-400 MC	
TEST CONFIGURATION LOG F4B/J FINCAP ANTENNA T8 WR 703-174	CONFIGURATION DESCRIPTION	Same as Conf. 12 except added 8-1/2" aft element with 141 MC choke as shown (14.45" long)	Same as Conf. 13 except added chokes at the 2 Big Slots, cut for 310 MC (6.58" long)	All Gaps 0.3" wide Note: All dimensions in inches Same as Conf. 14 except added to Aft Capacitive piece % as shown and tuning cap. block is all the way in.	2.5
&	NUMBER	13	14	15	
PROGRAM	DATE	77/2/2	77/2/2	77/2/2	

	SHEET 4 OF 12	PATTERNS MADE	Z 30-400 MC		z 30-400 мс
TEST CONFIGURATION LOG	F4B/J FINCAP ANTENNA TR WR 703/174	CONFIGURATION DESCRIPTION	Same as Conf. 14 except modified the 2 capactive stubs as shown and with Cap. Block all way out.	Note: All dimensions in inches	Same as Conf. 16 except 60° strap is spaced with Teflon strip and now 3.68" long. All chokes are shorted out except 1st one aft of feed point. Coil now 1 1/2 turns long.
		NUMBER	16		17
	PROGRAM	DATE	2/4/77		77/1/2

	SHEET 5 OF 12		PATTERNS MADE	Z = 30-400 MC			
TEST CONFIGURATION 1 OG		F4B/J FINCAP ANTENNA TR WR 703-174	CONFIGURATION DESCRIPTION	Both Vert. Gnd. Straps are modified per 16 $\&$ 17 ant. extended with Cap. straps as shown, one choke and 2 coils.	Fwd	5 Turn 0.5 dia	Note: All dimensions in inches
			NUMBER	18			
		PROGRAM	DATE	2/25/77			

SHEET 6 OF 12	PATTERNS MADE	Z = 30-400 MC Z = 30-400 MC
TEST CONFIGURATION LOG F4B/J FINCAP ANTENNA TR.WR 703-174	CONFIGURATION DESCRIPTION	Same as Conf. 18 except without coils, 60° strip is now Vertical & Wider & 0.6" X 4.0", and 200-300 strip is filled in on top right side. Fwd Tunes = 100 MHz Tunes = 100 MHz Tunes = 100 MHz Tunes = 100 MHz Tunes = 100 0 MHz Tunes = 100 0 MHz Tunes = 100 100 MHz Ax 0.6 Note: All dimensions in inches
	NUMBER	20
PROGRAM _	DATE	2/25/77

SHEET 8 OF 12	PATTERNS MADE	Z= 30-400, PWR loss in SC 377 & Field Strength Tests Z = 30-400	et 120, 120
TEST CONFIGURATION LOG F4B/J FINCAP ANTENNA TR.WR 703-174	CONFIGURATION DESCRIPTION	Same as Conf. 21 except removed new TAB on Aft Tuning Stub, and FWD Resistor & Cap. Stud replaced with SC-377 cloth as shown \$80.3 Same as Conf. 22 except SC-77 space cloth is now 2.42 in long % 1850. Note: All dimensions in inches	
RAM	NUMBER	53 53	
PROGRAM	DATE	3/10/77	

SHEET <u>9</u> 0F <u>12</u>	P ATTERNS MADE	Z = 30-400 MC EFF 110-400 MC 1/5 scale patterns	1/5 scale @ 325 MC
TEST CONFIGURATION LOG F4B/J FINCAP ANTENNA TR.WR 703-174	CONFIGURATION DESCRIPTION	MAC Proto. w/6 1/2 turn coil at Feed Point, Modified Fwd tuning stub as shown, add cap. extension on FWD END with SC-100 termination similar to Conf. 22. Light wiring was lowered c/o waveguide as shown (SC-100 \tilde{z} 300 Ω)	Fiberglass from Conf 23 Sc 100
AM	NUMBER	24	25
PROGRAM	DATE	3/15/77	3/15/77

	SHEET 10 OF 12	PATTERNS!: ADE	Z = 30-400 MC 1/5 scale patterns	
TEST CONFIGURATION LOG	F4B/J FINCAP ANTENNA TR WR 703-174	CONFIGURATION DESCRIPTION	Same as Conf. 24, i.e. new Tailight wiring & same FWD Cap. stub. and 6 1/2 turn coil. Now Cap. extension on FWD end us shown with SC-100 Showing a D.C. Res. = 140 £. 2.2 Riberglass Base Main Antenna Fiberglass Base Main Antenna Fiberglass Strap Fiberglass Scrap Fiberglass Strap Fiberglass Strap Fiberglass Strap Fiberglass Strap Fiberglass Base	
		NUMBER	56	
	PROGRAM -	DATE	3/16/77	

SHEET 11 OF 12		PATTERNS MADE	1/5 scale patterns	z = 30-400 efficiency 30-400	2 30-400 1/5 scale patterns	
TEST CONFIGURATION LOG		F4B/J FINCAP ANTENNA TR WR 703-174	CONFIGURATION DESCRIPTION	Same as Conf. 25 except element only, w/o only dielatric (fiber glass)	Same as Conf. 24 except space cloth is as shown below in view Lkg. aft with Eccofoam PS, (K=1.2) spacer between space cloth and fiber glass.	SC 100 Brass Frican Lape Brass Fincap Base Const All dieces extended Fwd to tip of antenna. Last 2 1/2" of AL 3"s vertical piece is cut off. Original NADC Antenna element is lengthened 2.70" X 2" high. x 2.16". used Eccofoam SH under SC-100. Also top of SC-100 clamped with. AL strip. Fwd 2.7 Twd 2.7 T
			NUMBER	27	28	53
		PROGRAM	DATE	3/23/77	3/3/77	4/12/77

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APPENDIX B

F-4 ANTENNA PATTERNS

		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
CONFIGURATION:		INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🗹 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-16-77

DOCUMENT

ANTENNA:	NADC	TEST IDENT .: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1625 MHz
CONFIGURATION		INTEGRATOR COUNT:	θ- φ- 90°
DELLA DISC		POLARIZATION: E D E B	UIHER:
HEMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE 3-16-77
		OBSERVER.	DATE. STOTT

ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:		MODEL FREQUENCY:	1625 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- φ-
		POLARIZATION: E Ø D E	9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-16-77

ANTENNA:	NADC	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	. 325 MHz
MODEL SCALE:		MODEL FREQUENCY:	1625 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- φ- - 60°
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE 3-16-77
			VAIL.

		DOCUMENT
		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
CONFIGURATION:		
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-16-77

		DOCUMENT
		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
CONFIGURATION		
		POLARIZATION: E P E O OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-16-77

ANTENNA: NADC ANTENNA LOCATION: FINCAP MODEL SCALE: 1/5 TEST IDENT:: 703-174 (F-4) FULL SCALE FREQUENCY: 1/5 MODEL FREQUENCY: 1/5	325 MHz
MODEL SCALE:	325 MHz
MODEL SCALE:	325 MHz
MODEL SCALE: 1/5 MODEL FREQUENCY: 1	625 MHz
INTEGRATOR COUNT: POLARIZATION: E & B E D D PLOTTED IN: RELATIVE dB	OTHER:
TRANSMISSION DISTANCE:	200 F1
OBSERVER: PN, BM	DATE:

		REVISION
		TEVISION
ANTENNA:	NADC	TEST IDENT .: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:		MODEL FREQUENCY: 1625 MHz
CONFIGURATION:		HATEGRATOR COUNT:
	•	POLARIZATION: E Ø E E Ø C OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-16-77

ANTENNA:	NADC	TEST IDENT.: 703-174 (F-	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1625 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- 60° φ-
		POLARIZATION: E Ø 🗷 E Ø	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
-		OBSERVER: PN, BM	DATE:3-16-77

		DOCUMENT
		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:		MODEL FREQUENCY: 1625 MHz
		POLARIZATION: E DE E DOTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-16-77

		DOCUMENT
		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
	1/5	MODEL FREQUENCY: 165 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
CONFIGURATION:	-	INTEGRATOR COUNT:
DEMARKS.		POLARIZATION: E
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77
		OBSERVER. DATE: SOTT

ANTENNA:	NADC	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL EREQUENCY:	
MODEL SCALE:			θ- φ- 90°
CONFIGURATION:	4	INTEGRATOR COUNT:	
			θ
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:

ANTENNA:	NADC	TEST IDENT.: 70	03-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUE	ENCY:	33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY	1	165 MHz
CONFIGURATION:		INTEGRATOR COUNT		θ- 90° φ-
DEMARKS				OTHER:
REMARKS:		PLOTTED IN: RELATI		285 FT
		TRANSMISSION DIST		
		OBSERVER: PN,	D (VI	DATE:

ANTENNA: NADC ANTENNA LOCATION: FINCAP MODEL SCALE: 1/5 ANTENNA LOCATION: FINCAP MODEL FREQUENCY: 33 MHz MODEL FREQUENCY: 165 MHz ANTENNA LOCATION: FINCAP MODEL FREQUENCY: 165 MHz	
MODEL SCALE: SCALE SCALE	
MODEL SCALE: 1/5 MODEL FREQUENCY: 165 MHz	
CONFIGURATION: $\frac{4}{2}$ INTEGRATOR COUNT: $\frac{6}{4}$	
POLARIZATION: E Ø 🗆 E Ø OTHER:	
REMARKS: PLOTTED IN: RELATIVE dB	
TRANSMISSION DISTANCE:285 FT	
OBSERVER: PN, BM DATE: 3	3-9-77

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ANTENNA:		TEST IDENT .: 703-174 (F	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	165 MHz
A			
—			

		30 112	0

V			
W			
			θ= 120°
			φ -
CONFIGURATION:	4	INTEGRATOR COUNT:	
		POLARIZATION: E ϕ \Box $E\theta$	■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:

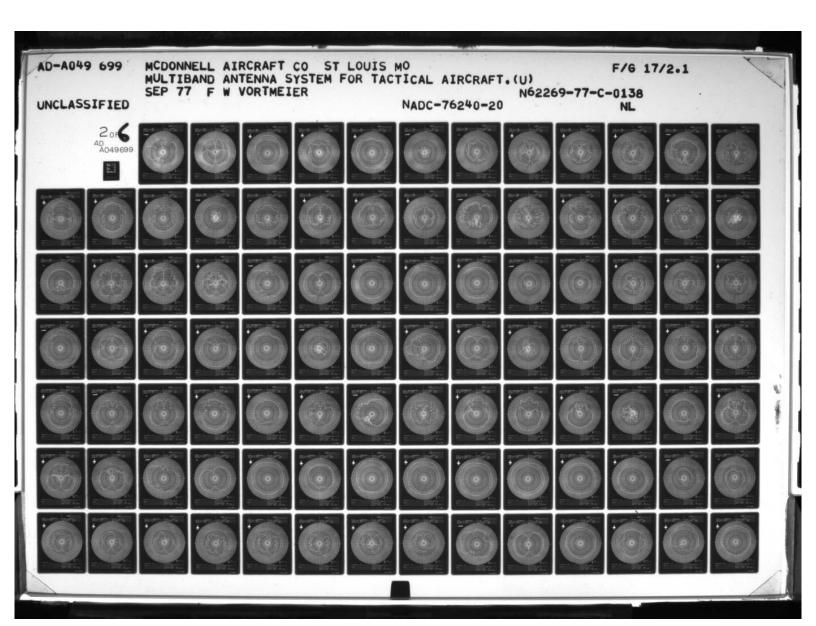
		DOCUMENT
		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:		MODEL FREQUENCY: 165 MHz
CONFIGURATION:		integrator count:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 3-9-77

ANTENNA: ANTENNA LOCATION: FINCAP MODEL SCALE: 1/5 MODEL FREQUENCY: MODEL FREQ	
ANTENNA LOCATION: FINCAP MODEL SCALE: 1/5 MODEL FREQUENCY: 33 M MODEL FREQUENCY: 165 N	
ANTENNA LOCATION: FINCAP MODEL SCALE: 1/5 MODEL FREQUENCY: 33 M MODEL FREQUENCY: 165 N	
MODEL SCALE: 1/5 MODEL FREQUENCY: 165 M	iHz
	1Hz
CONFIGURATION: 4 INTEGRATOR COUNT:	
POLARIZATION: E Ø E Ø D OTI	uen.
	nen:
REMARKS: PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285	FT
OBSERVER: PN, BM D	ATE: 3-9-77
OBSERVER: 111, BM D	AIE

		DOCUMENT _	
		REVISION	
ANTENNA:	NADC	TEST IDENT.: 703-174 (I	F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	33 MHz
MODEL SCALE:		MODEL FREQUENCY:	165 MHz
CONFIGURATION:			θ
CONFIGURATION:		POLARIZATION: E D E 6	
DEMARKS:		PLOTTED IN: RELATIVE dB	U UINEN.
HEMAHKS:		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE 3.9.77
		ORSERVER:FN, DIVI	DATE:

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		115 4 10/014
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:		MODEL FREQUENCY: 165 MHz
		θ- 60° φ-
CONFIGURATION:		INTEGRATOR COUNT:
25144.01/0		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

		DOCUMENT
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:		MODEL FREQUENCY: 165 MHz
		θ- 120°
CONFIGURATION:	4	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77



		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 76 MHz
	1/5	MODEL FREQUENCY: 380 MHz
MODEL SCALE:		MODEL FREQUENCY:380 MHz
CONFIGURATION:	4	INTEGRATOR COUNT:
		POLARIZATION: E D E OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
ILWANNS.		TRANSMISSION DISTANCE: 285 FT

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		DOCUMENT
		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATIO	ON: FINCAP	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 380 MHz
CONFIGURATION:		
		POLARIZATION: E D E O THER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

		DOCUMENT	
		REVISION	
ANTENNA:	NADC	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	76 MHz
MODEL SCALE:		MODEL FREQUENCY:	380 MHz
MODEL SCALE.		MODEL PREQUENCY:	
A			
A			
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XXX			
V			
			θ
			θ=
			φ
CONFIGURATION:	4	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: _3-9-77

		REVISION
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 380 MHz
		θ60°
CONFIGURATION:		POLARIZATION: E Ø D E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
neimanks:		TRANSMISSION DISTANCE:
		OBSERVER: PN, BM DATE: 3-9-77

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ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	76 MHz
		MODEL EREQUENCY:	80 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- 120° φ-
		POLARIZATION: E Ø 🗆 E 8	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	295 ET
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:

		REVISION
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 380 MHz
CONFIGURATION:	-	INTEGRATOR COUNT:
REMARKS:		POLARIZATION: E Ø 📵 E Ø 🗆 OTHER:
nemanks:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77
		UBSERVER:UAIE:UAIE:

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		NEVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
		MODEL FREQUENCY:380 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 380 MHz
CONFIGURATION:	4	INTEGRATOR COUNT:
CONFIGURATION.		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
HENRING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN. BM DATE 3-9-77
		OBSERVER: PN, BM DATE: 3-9-77

		REVISION
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:_	FINCAP	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL ERECLIENCY: 380 MHz
CONFIGURATION:		
		POLARIZATION: E D . E D OTHER:
REMARKS:		POLARIZATION: E . E . E . OTHER:
REMARKS:		

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ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4	76 MHz
ANTENNA LOCATION:	1/5	FULL SCALE FREQUENCY:	380 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	380 MHz
CONFIGURATION:	4	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-9-77

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ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	1/F	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 380 MHz
CONFIGURATION:		NTEGRATOR COUNT:
CONFIGURATION:		POLARIZATION: E D E D OTHER:
DEMARKS.		
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77
		UNIE: STOPP

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ANTENNA:	NADC	TEST IDENT.: 703-174 (I	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	
MODEL SCALE:		MODEL FREQUENCY:	725 MHz
CONFIGURATION:			θ ϕ θ
		POLARIZATION: E D E B	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	
			DATE:

ANTENNA:	NADC	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:		MODEL FREQUENCY:	725 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- φ- 90°
CONFIGURATION:		POLARIZATION: E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-9-77

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		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
	1/5	MODEL FREQUENCY: 725 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 725 MHz
CONFIGURATION:	4	INTEGRATOR COUNT:
CONFIGURATION:	-	POLARIZATION: E D E D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 725 MHz
CONFIGURATION		φ
CONFIGURATION:	-	INTEGRATOR COUNT
DEMA DUC.		POLARIZATION: E D E OTHER:
HEMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

		DOCUMENT REVISION	
ANTENNA:	NADC	TEST IDENT.: 703-174 (I	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	145 MHz
MODEL SCALE:		MODEL FREQUENCY:	725 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- 120° φ-
	,		● OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 3-9-77

		REVISION
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 725 MHz
3 10 05	20 25 30 3	36 30 25 20 11 10

V		
		θ-
		0- 0°
		4
CONFIGURATION:	4	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖲 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

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		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 145 MHz
		MODEL FREQUENCY: 725 MHz
CONFIGURATION:		MODEL FREQUENCY: Page 125 MIZ Page 125 MIZ
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77
		DATE:

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		HE VISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:		MODEL FREQUENCY: 725 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

ANTENNA:	NADC	TEST IDENT.:	703-174 (F-4	u)
ANTENNA LOCATION:		FULL SCALE FREC	DUENCY:	145 MHz
MODEL SCALE:		MODEL FREQUENC	CY:	725 MHz
CONFIGURATION:				θ60°
				OTHER:
REMARKS:		PLOTTED IN: RELA		
		TRANSMISSION DIS	STANCE:	285 FT
		OBSERVER: PN	N, BM	DATE:3-9-77

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		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION	FINCAP	FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:		MODEL FREQUENCY: 725 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

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ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
		MODEL FREQUENCY: 1625 MHz
MODEL SCALE:		MODEL FREQUENCY: 1625 MHz
		θ- φ- ⁰⁰
CONFIGURATION:	4	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🗷 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT OBSERVER: PN, BM DATE: 3-9-77
		OBSERVER: PN, BM DATE: 3-9-77

		REVISION	
ANTENNA:	NADC	TEST IDENT.: 703-174 (F.	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL EREQUENCY:	1625 MHz
			θ- φ- 90°
CONFIGURATION	4	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	● OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	285 F I
		OBSERVER: PN, BM	DATE: _3-9-77

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		TIE VISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:		MODEL FREQUENCY: 1625 MHz
A COURT SCALE:		
ONFIGURATION:	4	INTEGRATOR COUNT:
		POLARIZATION: E Ø E OTHER:
EMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

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		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
MODEL SCALE:		MODEL FREQUENCY: 1023 MHZ
CONFIGURATION:	4	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

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ANTENNA:	NADC	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1625 MHz
MODEL SCALE:		MODEL FREQUENCY:	1625 MHz
			θ- 120°
			φ-
CONFIGURATION:	4	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	005.57
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:

		NEVISION _	
ANTENNA:	NADC	TEST IDENT.:	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	325 MHz
MODEL SCALE:		MODEL FREQUENCY:	1625 MHz
CONFIGURATION:			θ- φ- 0°
		POLARIZATION: E Ø E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	3-9-77

ANTENNA:	NADC	TEST IDENT.:703-174 (F	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:		MODEL FREQUENCY:	1625 MHz
			θ- φ- 90°
CONFIGURATION:	-	INTEGRATOR COUNT:	
REMARKS:	,	POLARIZATION: E & E &	U OTHER:
TEMANNS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-9-77
		OBSERVER. TH, DM	DATE:

		DOCUMENT
		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:		MODEL FREQUENCY: 1625 MHz
CONFIGURATION:		HITEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-9-77

		DOCUMENT
		REVISION
ANTENNA:	NADC	TEST IDENT.: 703-174 (F-4)
		FULL SCALE FREQUENCY: 325 MHz
		MODEL FREQUENCY: 1625 MHz
ANTENNA LOCATION: MODEL SCALE:	1/5	FULL SCALE FREQUENCY: 325 MHz MODEL FREQUENCY: 1625 MHz
CONFIGURATION:	4	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
-		OBSERVER: PN, BM DATE: 3-9-77

		-	
	NADC	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION: MODEL SCALE:	FINCAP	FULL SCALE FREQUENCY:	
			θ- 120°
CONFIGURATION:	4		
0544.075		POLARIZATION: E DE E	9 LI OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		ORSERVER: PN. BM	DATE 3-9-77
		OBSERVER: PN, BM	DATE:

		REVISION	
		<u> </u>	
ANTENNA: MODIFIE		TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	165 MHz
CONFIGURATION:			θ- φ- 0°
CONTIGUIATION.		POLARIZATION: E D E B	
DEMA DVC.			■ UIHEK:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	DATE 3.25.77
		OBSERVER: PN, BM	DATE: 3-25-77

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ANTENNA: MODIFIED	NADC W/CAP (MED)	TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	
SCALE:			θ- φ- 90°
CONFIGURATION:	24	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	● OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	20577

ANTENNA: MODIFIE	D NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	165 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- 90° φ-
		POLARIZATION: E Ø 🗆 E 8	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 57
		TRANSMISSION DISTANCE:_	285 F I
		OBSERVER: PN, BM	DATE: _3-25-77

ANTENNA: MODIFIE	D NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE	1/5		
MODEL SCALE:			θ- 60° φ
CONFIGURATION:		INTEGRATOR COUNT:	
		POLARIZATION: E Ø D E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	295 ET
		TRANSMISSION DISTANCE:	260 F I
		OBSERVER: PN, BM	DATE:

		REVISION	
	D NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:	1/E	FULL SCALE FREQUENCY:_	
MODEL SCALE:	1/5	MODEL FREQUENCY:	165 MHz
			θ- 120° φ-
CONFIGURATION:	24	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	● OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205.57
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 3-25-77
		OBSERVER: PN, BM	DATE:3-25-77

ANTENNA: MODIFIE		TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	165 MHz
			θ- φ- 0°
CONFIGURATION:	24	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗷 E Ø	☐ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 57
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-1-77

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		REVISION
ANTENNA: MODIFI	ED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
MODEL SCALE:		MODEL PREGUENCY:
CONFIGURATION:	24	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø D OTHER:
EMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-1-77

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		REVISION
ANTENNA: MODIF	IED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
CONFIGURATION:		θ90°
CONFIGURATION:		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TIEWATING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-1-77

ANTENNA MODIELE	NADOW/CAR (MED)	702 174 (5.4)	
ANTENNA: MODIFIED		TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:	1/5	FULL SCALE FREQUENCY:	33 MHz 165 MHz
CONFIGURATION:			θ- 60° φ-
CONFIGURATION:		INTEGRATOR COUNT:	
DEMARKS			OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	20011
		OBSERVER: PN, BM	DATE: 4-1-//

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	REVISION
ANTENNA: MODIFIED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE: 1/5	MODEL FREQUENCY: 165 MHz
	θ- 120° φ-
CONFIGURATION: 24	INTEGRATOR COUNT:
	POLARIZATION: E Ø E Ø OTHER:
REMARKS:	
	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 4-1-77

	REVISION
ANTENNA: MODIFIED NADC W/CAP (M	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE: 1/5	MODEL FREQUENCY: 380 MHz
CONFIGURATION: 24	INTEGRATOR COUNT:
	POLARIZATION: E Ø 🗆 OTHER:
REMARKS:	PLOTTED IN: RELATIVE dB
	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 3-25-77

TEST IDENT.: 703-174 (F-4) FULL SCALE FREQUENCY: 76 MHz MODEL FREQUENCY: 380 MHz
FULL SCALE FREQUENCY: 76 MHz MODEL FREQUENCY: 380 MHz
FULL SCALE FREQUENCY: 76 MHz MODEL FREQUENCY: 380 MHz
MODEL FREQUENCY: 380 MHz
HITEGRATOR COUNT:
POLARIZATION: E Ø 🗆 E Ø 🖲 OTHER:
PLOTTED IN: RELATIVE dB
TRANSMISSION DISTANCE: 285 FT
OBSERVER: PN, BM DATE: 3-25-77

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MODIELE	D NADC W/CAR (MED)	702 174 (5 4)	
ANTENNA: MODIFIE		TEST IDENT.: 703-174 (F-4) FULL SCALE FREQUENCY:	76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	000 1111
			θ- 90° φ-
CONFIGURATION:	24	INTEGRATOR COUNT:	
REMARKS:		POLARIZATION: E	G OTHER:
neiviAnk5:		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-25-77

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ANTENNA: MODIFIEL	NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	70.4411
MODEL SCALE:	1/5	MODEL FREQUENCY:	380 MHz
			θ- 60° φ-
CONFIGURATION:	24	INTEGRATOR COUNT:	
DEMARKS.		POLARIZATION: E	OTHER:
HEMAHKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-25-77
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ANTENNA: MODIFIED		TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:_	1/5	FULL SCALE FREQUENCY:	380 MHz
ANTENNA LOCATION: MODEL SCALE:	1/5		380 MHz
			φ
CONFIGURATION:	24		
		POLARIZATION: E Ø 🗆 E	9 THER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:

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	REVISION
ANTENNA: MODIFIED NADC W/CAP (MED)	_ / 1001 1001111
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY:
MODEL SCALE: 1/5	MODEL FREQUENCY: 380 MHz
	6
	φ
CONFIGURATION: 24	_ INTEGRATOR COUNT:
	POLARIZATION: E DE E O OTHER:
REMARKS:	PLOTTED IN: RELATIVE dB
	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 3-25-77
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		HEVISION	
ANTENNA: MODIFIED	NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	
			θ- φ- 90°
CONFIGURATION:	24	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 📵 E Ø	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
neivianns			OOF FT
neiwanns.		TRANSMISSION DISTANCE: OBSERVER:PN, BM	285 FT

ANTENNA: MODIFIE	NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	
MODEL SCALE:	1/5	MODEL FREQUENCY:	
			θ- 90° φ-
CONFIGURATION:		INTEGRATOR COUNT:	
		POLARIZATION: E Ø E 6	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:_	285 F I
		OBSERVER: PN, BM	DATE: 3-25-77

		DOCUMENT _ REVISION	
ANTENNA: MODIFIE	D NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	380 MHz
	24		θ- 60° φ-
CONFIGURATION:		POLARIZATION: E Ø E 6	
REMARKS:		PLOTTED IN: RELATIVE dB	U UIREN.
TEMATING.		TRANSMISSION DISTANCE:	285 FT
		OBSERVER PN. BM	DATE: 3-25-77
		OBSERVER: PN, BM	DATE: 3-25-77

ANTENNA: MODIFIE	D NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION: MODEL SCALE:		MODEL FREQUENCY:	380 MHz
CONFIGURATION:	24	INTEGRATOR COUNT:	θ = $\frac{120^{\circ}}{\phi}$ =
			OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-25-77

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	D NADC W/CAP (MED)	TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
	24		
CONFIGURATION:	24	INTEGRATOR COUNT:	
			9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	DATE 3.20.77
		OBSERVER: PN, BM	DATE:

ANTENNA:MODIFIED NADC W/CAP (MED) ANTENNA LOCATION:FINCAP MODEL SCALE:				
FULL SCALE FREQUENCY: 15 MODEL FREQUENCY: 15 MODEL FREQUENCY: 15 MHz MODEL FREQUENCY: 125 MHz MODEL FREQUENCY: 125 MHz MODEL FREQUENCY: 126 MHz MODEL FREQUENCY: 126 MHz MODEL FREQUENCY: 127 MHz MODEL FREQUENCY: 128 MHz MODEL FREQUENCY: 149 MHz MODEL FREQUENCY: 140 MHz MO			-	
MODEL SCALE: 1/8 MODEL FREQUENCY: 1/25 MH2 MODEL FREQU		NADC W/CAP (MED)	TEST IDENT .: 703-174 (F-4)	
MODEL SCALE: 1/8 MODEL FREQUENCY: 7/3 MH2 MODEL FREQUENCY: 7/3 MH2 MODEL FREQUENCY: 7/3 MH2 POLARIZATION: 24 REMARKS PILOTED IN: RELATIVE © EØ ® OTHER. POLARIZATION: EØ DEØ TANSMISSION DISTANCE: 285 FT	ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	145 MHz
CONFIGURATION: 24 INTEGRATOR COUNT: POLARIZATION: EØ DEØ OTHER: PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 286 FT	MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
POLARIZATION: E Ø D OTHER: PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT				θ
PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT	CONFIGURATION:	24		
TRANSMISSION DISTANCE: 285 FT				
TRANSMISSION DISTANCE: 203 FT	REMARKS:			
			TRANSMISSION DISTANCE:	200 F1
OBSERVER: PN, BM DATE: 3-29-77			OBSERVER: PN, BM	DATE: 3-29-77

ANTENNA: MODIFIE	D NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/5		725 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ- 90° φ-
CONFIGURATION:		INTEGRATOR COUNT:	
DEMARKS.		POLARIZATION: E # DE #	OTHER:
HEMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-29-77
		OBSERVEN: THE DIM	DATE:

	DOCUMENT
	REVISION
ANTENNA: MODIFIED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE: 1/5	MODEL FREQUENCY: 725 MHz
	HITEGRATOR COUNT:
CONFIGURATION: 24	POLARIZATION: E D D OTHER:
REMARKS:	PLOTTED IN: RELATIVE dB
neiwanns:	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 3-29-77
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		REVISION	
ANTENNA: MODIFIE	D NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	
			θ- 120° φ-
CONFIGURATION:	24	INTEGRATOR COUNT:	
			OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	005.57
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:

		NEVISION	
ANTENNA: MODIFIE		TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
CONFIGURATION:			θ- φ- 0°
		POLARIZATION: E Ø E Ø	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
			DATE: 3-29-77

	REVISION
ANTENNA: MODIFIED NADC W/CAP (MED)	
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE: 1/5	MODEL FREQUENCY: 725 MHz
CONFIGURATION: 24	INTEGRATOR COUNT:
	POLARIZATION: E Ø E Ø D OTHER:
REMARKS:	PLOTTED IN: RELATIVE dB
	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 3-29-77

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ANTENNA: MODIFIE	D NADC W/CAP (MED)	TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
			θ- 90° φ-
CONFIGURATION:	24		
		POLARIZATION: E Ø 🗷 E 8	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	3.20.77

		REVISION	
ANTENNA: MODIFIE	D NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
A CONTRACTOR OF THE PARTY OF TH			θ- 60° φ-
CONFIGURATION:	24	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗷 E 8	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 3-29-77

ANTENNA: MODIFIED NADC W/CAP (MED) ANTENNA LOCATION: FINCAP MODEL SCALE: 1/5 FULL SCALE FREQUENCY: 145 MHz MODEL FREQUENCY: 725 MHz	
ANTENNA LOCATION: FINCAP FULL SCALE FREQUENCY: 145 MHz MODEL SCALE: 1/5 MODEL FREQUENCY: 725 MHz	
ANTENNA LOCATION: FINCAP FULL SCALE FREQUENCY: 145 MHz MODEL SCALE: 1/5 MODEL FREQUENCY: 725 MHz	
MODEL SCALE:	
θ	
CONFIGURATION: 24 INTEGRATOR COUNT:	
POLARIZATION: E Ø E O THER:	
REMARKS: PLOTTED IN: RELATIVE dB	
TRANSMISSION DISTANCE: 285 FT	
OBSERVER:PN, BMDATE:3-29-	77

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ANTENNA: MODIFIED NADC W/CAP (M	IED)	TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION: FINCAP		FULL SCALE FREQUENCY	325 MHz
MODEL SCALE: 1/5		MODEL FREQUENCY:	1625 MHz
			θ- φ- 0°
REMARKS:			
		ORSERVER PN. BM	DATE: 3-29-77
CONFIGURATION: 24 REMARKS:		INTEGRATOR COUNT: POLARIZATION: E Ø □ E PLOTTED IN: RELATIVE dE TRANSMISSION DISTANCE OBSERVER:PN, BM	φ =

		DOCUMENT
		REVISION
ANTENNA: MODIFI	ED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
		φ- - 90°
CONFIGURATION:		INTEGRATOR COUNT:
REMARKS:		POLARIZATION: E Ø 🔲 E Ø 🖭 OTHER:PLOTTED IN: RELATIVE dB
HEMARKS:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 3-29-77
		DATE:

	REVISION
ANTENNA: MODIFIED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:1/5	MODEL FREQUENCY: 1625 MHz
ONFIGURATION: 24	INTEGRATOR COUNT:
	POLARIZATION: E P E OTHER:
EMARKS:	PLOTTED IN: RELATIVE dB
	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 3-29-77

ANTENNA: MODIFIED		HEVISION	
ANTENNA: MODIFIED			
*********	NADC W/CAP (MED)	TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1625 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ = 60° φ =
CONFIGURATION:2	24	INTEGRATOR COUNT:	7
		POLARIZATION: E Ø D E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:

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	REVISION
ANTENNA: MODIFIED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE: 1/5	MODEL FREQUENCY: 1625 MHz
MODEL SCALE: 1/5	MODEL FREQUENCY: 1625 MHz
CONFIGURATION: 24	INTEGRATOR COUNT:
CONTROL CONTROL	POLARIZATION: E D E B OTHER:
REMARKS:	PLOTTED IN: RELATIVE dB
	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 3-29-77

		REVISION	
ANTENNA: MODIFIE	ED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	
CONFIGURATION:		INTEGRATOR COUNT:	θ- φ- - 0°
		POLARIZATION: E Ø E &	
REMARKS:		PLOTTED IN: RELATIVE dB	
newalling.		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 3-29-77

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	REVISION
ANTENNA: MODIFIED NADC W/CAP (MED)	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE: 1/5	MODEL FREQUENCY: 1625 MHz
CONFIGURATION: 24	INTEGRATOR COUNT:
	POLARIZATION: E Ø E Ø OTHER:
REMARKS:	PLOTTED IN: RELATIVE dB
REMARKS:	

	DOCUMENT
	REVISION
ANTENNA: MODIFIED NADC W/C	CAP (MED) TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION: FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE: 1/5	MODEL FREQUENCY: 1625 MHz
CONFIGURATION: 24	HITEGRATOR COUNT:
	POLARIZATION: E Ø E O OTHER:
REMARKS:	PLOTTED IN: RELATIVE dB
	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 3-29-77

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ANTENNA: MODIFIE		TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	
MODEL SCALE:	1/5	MODEL FREQUENCY:	1625 MHz
A			

V			
			θ- 60°
			G =
			φ=
	24		
CONFIGURATION:	24	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗷 E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 3-29-77

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ANTENNA: MODIFIE		TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	1/E	FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	179	MODEL FREQUENCY:	1025 MHZ
A			
5 10 28	20 25 30 35	35 30 725	20 5 10

w.			
			1200
			θ- 120°
			φ -
CONFIGURATION:	24	INTEGRATOR COUNT:	
			9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 3-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	33 MHz
		MODEL EREQUENCY:	165 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	## 165 MHz ## 165
	20		
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E	• OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	4-22-77
		OBSERVER: PN, BM	DATE:

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:_	FINCAP	FULL SCALE FREQUENCY: 33 MHz
	1/5	MODEL FREQUENCY: 165 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
		θ- φ- 90°
CONFIGURATION:		POLARIZATION: E # D E # OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
CONFIGURATION:		
		POLARIZATION: E Ø 🗆 E Ø 🖪 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77
		DATE:

		DOCUMENT
		HEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	ELLI SCALE ERECLIENCY. 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
CONFIGURATION:		HTEGRATOR COUNT
		POLARIZATION: E Ø 🗖 E Ø THER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 4-22-77

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		HEVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	
CONFIGURATION:		INTEGRATOR COUNT:	θ θ ϕ
		POLARIZATION: E D E B	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
		MODEL FREQUENCY:	165 MHz
CONFIGURATION:	29		θ
		POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: _4-22-77

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		REV YON	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	:-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	33 MHz
MODEL SCALE:		MODEL FREQUENCY:	165 MHz
			θ- 95° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 57
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:

		DOCUMENT
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:_		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	- I=	MODEL FREQUENCY: 165 MHz
CONFIGURATION:		NTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77

		HEVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	· 4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	165 MHz
			θ- 120° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
DEAL DEC		POLARIZATION: E Ø D E Ø	■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	20311
		OBSERVER: PN, BM	DATE: 4-22-77

		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4	1)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	165 MHz
			θ = $\frac{150^{\circ}}{\phi}$ =
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E # DE # B	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-22-77

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		MEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:
CONFIGURATION:		
		POLARIZATION: E Ø 🖸 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TEMATIKS.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77
		DATE.

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	165 MHz
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖭 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77

ANTENNA:	FLYING PROTOTYPE	TEST (DENT : 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	
MODEL SCALE:	1/5	MODEL FREQUENCY:	165 MHz
CONFIGURATION:			θ
		POLARIZATION: E Ø 🗉 E Ø	
REMARKS		PLOTTED IN: RELATIVE dB	001 57
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: _ 4-22-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
CONFIGURATION:		HATEGRATOR COUNT:
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77

		DOCUMENT
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
CONFIGURATION:		HTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER:PN, BM DATE:4-22-77

		DOCUMENT
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION	FINCAP	FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	165 MHz
CONFIGURATION:		POLARIZATION: E P E O OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77

			VT
ANTENNA:	FLYING PROTOTYPE	TEST IDENT 703-1	74 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENC	
MODEL SCALE:		MODEL FREQUENCY:	
CONFIGURATION:			θ- 95° φ-
			Θ □ OTHER:
REMARKS:		PLOTTED IN: RELATIVE	
		TRANSMISSION DISTANC	
		OBSERVER: PN, BM	DATE: 4-22-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
CONFIGURATION:		
		POLARIZATION: E P E O OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 165 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
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		DOCUMENT
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 33 MHz
MODEL SCALE:		MODEL FREQUENCY: 165 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 210 MHz
CONFIGURATION:		
		POLARIZATION: E D D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-21-77
		DATE. TELL

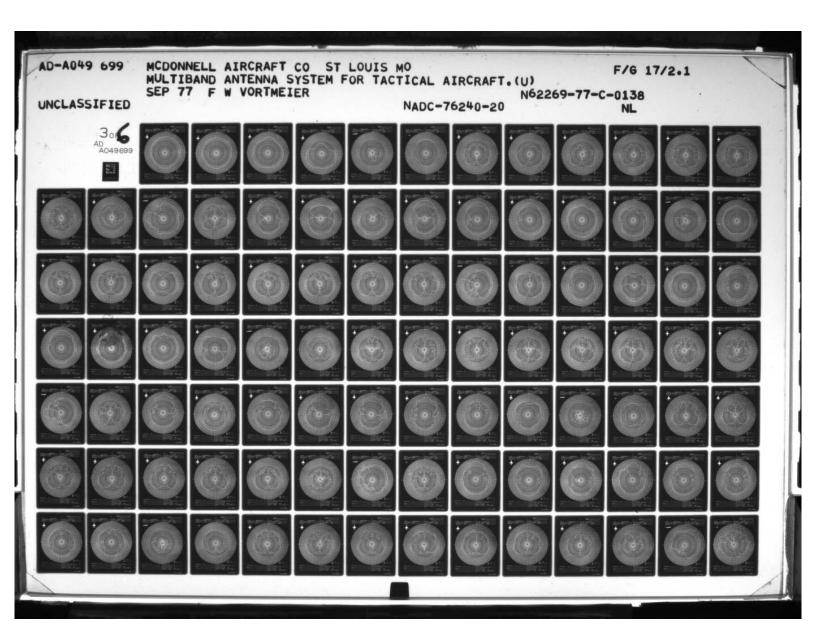
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	210 MHz
	29		θ- φ- 90°
		POLARIZATION: E D E B	
REMARKS:		PLOTTED IN: RELATIVE dB	e omen.
TO THE STATE OF TH		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	
		OBSERVER: THE SHE	DATE: 4-21-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	210 MHz
			θ- 90° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	• OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 57
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-21-77

		DOCUMENT
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 210 MHz
CONFIGURATION:		MODEL FREQUENCY: 210 MHz
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-21-77

	FLYING PROTOTYPE	TEST IDENT.: 70	03-174 (F-4)	42 MHz
ANTENNA LOCATION:	1/6	FULL SCALE FREQUE		10 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY	:	
				θ60°
CONFIGURATION:	29	INTEGRATOR COUNT		
				OTHER:
REMARKS:		PLOTTED IN: RELATI		285 ET
		TRANSMISSION DISTA	ANCE:	200 r l
		OBSERVER: PN, E		DATE: 4-21-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F.	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	210 MHz
CONFIGURATION:			θ
		POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:4-21-77



,			
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	4)
ANTENNA LOCATION:_	FINCAP	FULL SCALE FREQUENCY:	42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	210 MHz
CONFIGURATION:			θ- 95° φ-
CUNFIGURATION:		POLARIZATION: E D E B	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	
		ODGENIA ENI.	DATE: TELLI

		DOCUMENT
	ELVING PROTOTYPE	
		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz MODEL FREQUENCY: 210 MHz
CONFIGURATION:		INTEGRATOR COUNT:
		POLARIZATION: E D E OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-21-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	42 MHz
MODEL SCALE:			210 MHz
			θ- 120° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	• OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-21-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	42 MHz
	1/5	MODEL EREQUENCY:	
CONFIGURATION:		MODEL FREQUENCY:	θ- φ-
		POLARIZATION: E Ø 🗆 E	9 ■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-21-77

		_	
ANTENNA:			F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	
MODEL SCALE:	1/5	MODEL FREQUENCY:	210 MHz
			20

V.			
			θ=
			00
			Ψ=
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🖪 E Ø	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-21-77

		REVISION
		HEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 210 MHz
CONFIGURATION:		
CONFIGURATION:		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
HEMARKS:		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 4-21-77
		UBSERVER: TIS, SIII DATE: 4-21-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	210 MHz
MODEL SCALE:		MODEL FREQUENCY:	
**			θ- 90° — — — — — — — — — — — — — — — — — — —
CONFIGURATION:	29	INTEGRATOR COUNT:	
			9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: <u>4-21-77</u>

		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz	
MODEL SCALE:	1/5	MODEL FREQUENCY: 210 MHz	
CONFIGURATION:			
		POLARIZATION: E Ø G E Ø D OTHER:	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: 285 FT	
		OBSERVER:PN, BM DATE:4-21-77	

	EL VING BROTOTYPE		(F.A)
ANTENNA:	FINCAP	TEST IDENT.: 703-174 FULL SCALE FREQUENCY:	42 MHz
MODEL SCALE:	1/5	MODEL ERECUENCY:	210 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	θ- 60°
CONFIGURATION	29	INTEGRATOR COUNT:	
CONFIGURATION:			9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-21-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 210 MHz
CONFIGURATION:		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
newanno:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-21-77
		DATE. TETT

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 210 MHz
		θ- φ-
CONFIGURATION:	29	INTEGRATOR COUNT:
DEMA DICE		POLARIZATION: E # D E # C OTHER:
HEMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-21-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATIO	N: FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 210 MHz
CONFIGURATION:		
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-21-77

		REVISION
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 210 MHz
		θ- 120° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E ♥ ■ E ♥ □ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-21-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:		MODEL FREQUENCY: 210 MHz
CONFIGURATION:		INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER:PN, BM DATE:4-21-77

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 380 MHz
CONFIGURATION:		
		POLARIZATION: E Ø D E Ø OTHER:
DE114 DVC		PLOTTED IN: RELATIVE dB
REMARKS:		
REMARKS:		TRANSMISSION DISTANCE: 285 FT

ANTENNA: F	L VINC DEGLETATIVE		
	L VINC BROTOTYPE		
	LYING PROTOTYPE	TEST IDENT .: 703-174 (F-	4)
		FULL SCALE FREQUENCY:	76 MHz
MODEL SCALE:1/			
MODEL SCALE:1		MODEL FREQUENCY:36	
CONFIGURATION: 29	9	INTEGRATOR COUNT:	
		POLARIZATION: E ϕ \Box E θ	■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77

		-	
	FLYING PROTOTYPE		76 MHz
ANTENNA LOCATION		FULL SCALE FREQUENCY:_	390 MH2
MODEL SCALE:	1/5	MODEL FREQUENCY:	360 WH2
MODEL SCALE:		MODEL FREQUENCY:	
			φ=
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: <u>4-20-77</u>

		REVISION
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 380 MHz
ONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🖪 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

	EL VINC PROTOTYPE			
ANTENNA:				6 MHz
ANTENNA LOCATION:		FULL SCALE FREQ		
MODEL SCALE:			380 M	θ = $\frac{60^{\circ}}{\phi}$ =
CONFIGURATION:	29			
				OTHER:
REMARKS:		PLOTTED IN: RELA	TIVE dB	285 FT
		TRANSMISSION DIS	STANCE:	285 FT
		OBSERVER: PN	V, DIVI	DATE:

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
		MODEL EREQUENCY: 380 MHz
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🗑 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	380 MHz
CONFIGURATION:			θ- 95° φ-
		POLARIZATION: E O D E	9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
TICHATING.		TRANSMISSION DISTANCE:	285 FT
		ORSERVER: PN. BM	DATE: 4-20-77
		OBSERVER.	DATE:

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL ERECLIENCY: 3	
			θ- 100° φ-
CONFIGURATION:	20	INTEGRATOR COUNT:POLARIZATION: E Ø 🖸 E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	OTHER:
newanns:		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77
-		OUGENVEN.	DATE:

		DOCUMENT REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	380 MHz
CONFIGURATION:			θ- 120° φ-
		POLARIZATION: E	
REMARKS:		PLOTTED IN: RELATIVE dB	UIIILII.
incidentitio.		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77
		OUSERVER	DATE

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:		MODEL FREQUENCY: 380 MHz
		θ = $\frac{150^{\circ}}{\phi}$ = $\frac{150^{\circ}}{\phi}$
CONFIGURATION:	23	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

		REVISION
		TEST IDENT.: 703-174 (F-4)
		FULL SCALE FREQUENCY: 76 MHz
ANTENNA LOCATION: MODEL SCALE:	FINCAP 1/5	TEST IDENT: 703-174 (F-4) FULL SCALE FREQUENCY: 380 MHz MODEL FREQUENCY: 380 MHz
		θ = $\frac{0}{6}$ = $\frac{0}{6}$
CONFIGURATION:		INTEGRATOR COUNT: POLARIZATION: E Ø 🖸 E Ø 🗆 OTHER: PLOTTED IN: RELATIVE dB
newanks.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77
		DATE.

		REVISION
ANTENNA.	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 380 MHz
CONFIGURATION:	29	
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TEMATING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77
		DATE.

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:		MODEL FREQUENCY: 380 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

		REVISION
,		
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 380 MHz
CONFIGURATION:		INTEGRATOR COUNT
DEMARKS		POLARIZATION E D E D OTHER
REMARKS		PLOTTED IN RELATIVE dB
		TRANSMISSION DISTANCE 285 FT
		OBSERVER PRE BM DATE 4-20-77

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
	1/5	MODEL FREQUENCY:	380 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ- 60° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🖪 E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77

		REVISION
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 380 MHz
CONFIGURATION:		HTEGRATOR COUNT:
		POLARIZATION: E Ø @ E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

		REVISION
		NEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 380 MHz
CONFIGURATION:		HITEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

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		REVISION	
	EL VINC BROTOTVES	703.174.0	E.A)
ANTENNA:	FINCAP	TEST IDENT.: 703-174 (I	76 MHz
ANTENNA LOCATION:			
MODEL SCALE:	1/5	MODEL FREQUENCY:	360 WHZ
A			
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V			
			θ- 100°
			θ= 100°
			φ =
CONFIGURATION:	29	INTEGRATOR COUNT:	
			OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	200 F1
		OBSERVER: PN, BM	DATE: 4-20-77

		REVISION	
	EL VINC PROTOTYPE	702.174 (5	4)
ANTENNA:ANTENNA LOCATION:_	FLYING PROTOTYPE FINCAP	TEST IDENT.: 703-174 (F- FULL SCALE FREQUENCY:	
		MODEL ERECUENCY:	380 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- 120° φ-
		POLARIZATION: E Ø E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: _4-20-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT : 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:		MODEL EREQUENCY:	380 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:	θ
- Committee			9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
	1/5	MODEL FREQUENCY: 520 MHz
MODEL SCALE:		MODEL FREQUENCY: 520 MHz MODEL FREQUENCY: 5
		POLARIZATION: E Ø 🗖 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

		REVISION
		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 520 MHz
		θ- φ- 90°
CONFIGURATION:		INTEGRATOR COUNT:
DEMARKS:		POLARIZATION: E Ø D E Ø D OTHER:
HEMARKS:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77
		DATE: 4-10-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	
		MODEL EREQUENCY:	520 MHz
CONFIGURATION:		MODEL FREQUENCY:	θ- 90° φ-
CONTROLLATION.			OTHER:
DEMARKS			G UINER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:OBSERVER:PN, BM	DATE 4-18-77
		ORSERVER: FIN, DIVI	DATE:

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	104 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	520 MHz
CONFIGURATION:			θ- 30° φ-
CONFIGURATION:	-		OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	U OTTICIN.
TEMATIKS.		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

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ANTENNA	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA:ANTENNA LOCATION:_	FINCAP	FULL SCALE FREQUENCY:	104 MHz
		MODEL FREQUENCY:	520 MHz
MODEL SCALE:	77	MODEL FREQUENCY:	020
A			
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			θ= 60°
			d=
			Ψ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
55.4.755HATTON		POLARIZATION: E O E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77
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		REVISION	
ANTENINA	ELVING PROTOTYPE		-41
ANTENNA LOCATION:	FLYING PROTOTYPE FINCAP	FULL SCALE FREQUENCY:	104 MHz
MODEL SCALE	1/5	MODEL EDECUENCY.	520 MHz
MODEL SCALE:			θ =85°
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø D E Ø	■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-18-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT : 703-174 (F-	4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	104 MHz
	1/5	MODEL EREQUENCY:	520 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ= _95°
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E O E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

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ANTINAL COCATO	
CONFIGURATION: 29	
REMARKS:	

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	104 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	520 MHz
			θ = 120° φ =
CONFIGURATION:	23	INTEGRATOR COUNT:	
2544.846		POLARIZATION: E	UIHEH:
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77
		OBSERVER: TH, BIVI	UATE: 4-10-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	
MODEL SCALE:	1/5	MODEL EREQUENCY:	520 MHz
CONFIGURATION:			θ- 150° φ-
CONFIGURATION:	20	POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	W UINCK:
HEMARKS:		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE 4-18-77
-		OBSERVER.	DATE:

		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4	1)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	104 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY:	520 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- φ- 0°
		POLARIZATION: E Ø E E	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	
			- JA 1

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/5	MODEL ERECLIENCY: 520 MHz
CONFIGURATION:		
CONTIGORATION.		POLARIZATION: E Ø E Ø OTHER:
DEMARKS.		PLOTTED IN: RELATIVE dB
HEIMARKS:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77
		UBSERVER: UATE: TO TE

	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	520 MHz
			θ- 90° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
			OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 57
		TRANSMISSION DISTANCE:	285 F I
		OBSERVER: PN, BM	DATE: 4-18-77

		REVISION
		HEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 520 MHz
CONFIGURATION:		
CONFIGURATION:		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

		DOCUMENT REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
	1/5	MODEL FREQUENCY:	
CONFIGURATION:	29	INTEGRATOR COUNT:POLARIZATION: E Ø E Ø E	θ=60°
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	

		REVISION
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION	:_FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 520 MHz
CONFIGURATION:		HITEGRATOR COUNT:
CONFIGURATION:		POLARIZATION: E Ø E B D OTHER:
REMARKS		PLOTTED IN: RELATIVE dB
HEMARKS:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77
		DATE.

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	104 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	520 MHz
CONFIGURATION:			θ- 95° φ-
		POLARIZATION: E Ø E 6	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

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		HEVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	104 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	TOO \$411-
MODEL SCALE:		MODEL FREQUENCY:	θ- 100° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
DEMARKS		POLARIZATION: E Ø E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77
		UBSERVER: THE DIVI	UATE: 4-10-77

	,	NEVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	104 MHz
		MODEL FREQUENCY:	520 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ= 120°
CONFIGURATION:	29	INTEGRATOR COUNT:	φ=
		POLARIZATION: E Ø E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4) FULL SCALE FREQUENCY: 104 MHz
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:		MODEL FREQUENCY: 520 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 725 MHz
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
	FINCAP	FULL SCALE FREQUENCY: 145 MHz
	1/5	MODEL EREQUENCY: 725 MHz
ANTENNA LOCATION: MODEL SCALE:	FINCAP 1/5	FULL SCALE FREQUENCY: 145 MHz MODEL FREQUENCY: 725 MHz
W		θ-
		φ - 90°
CONFIGURATION:		INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

		D	OCUMENT	
	FLYING PROTOTYPE	TEST IDENT.:	703-174 (F-4	145 MHz
ANTENNA LOCATION:	1/F	FULL SCALE FR	EQUENCY:	725 MHz
MODEL SCALE:	1/5	MODEL FREQUE	NCY:	725 WIT 12
A				
			HHARAX	

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V				
				θ
			HHH	
				φ=
CONFIGURATION:	29			
		POLARIZATION:	EΦ □ Eθ !	■ OTHER:
REMARKS:		PLOTTED IN: RE		
		TRANSMISSION	DISTANCE:	285 FT
		OBSERVER:	PN, BM	DATE: 4-18-77

		_	
	FLYING PROTOTYPE	TEST IDENT .: 703-174	(F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
A COLES			θ- 30° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø D E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
			DATE: 4-18-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 725 MHz
CONFIGURATION:		
		POLARIZATION: E P E E OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 725 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 725 MHz
		φ
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø □ E Ø □ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT OBSERVER: PN, BM DATE: 4-18-77
		DATE: 4 10-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	145 MHz
MODEL SCALE:	1/5		θ =95°
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E D E 6	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

		REVISION
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
CONFIGURATION:	29	MODEL FREQUENCY: 725 MHz POLARIZATION: E \$\Pi\$ \Bigs OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT OBSERVER: PN, BM DATE: 4-18-77
		DATE: 4-10/77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:		MODEL FREQUENCY:	725 MHz
			θ- 120° φ-
CONFIGURATION:			<i>θ</i>
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-18-77

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	ELVING PROTOTYPE	703.174 (5.4	11
ANTENNA:		TEST IDENT.: 703-174 (F4 FULL SCALE FREQUENCY:	145 MHz
		MODEL ERECLIENCY:	725 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ= 150° φ=
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø D E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE: OBSERVER:PN, BM	DATE: 4-18-77
		ORSERVER: TH, DIVI	UATE:

		REVISION	
ANTENNA.	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	
			θ- φ- - 0°
ONFIGURATION:		POLARIZATION: E Ø E E Ø	
EMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

		HEVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F-	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
MODEL SCALE:			θ- 90°
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🖪 E Ø	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	200 FT
		OBSERVER: PN, BM	DATE: 4-10-//
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		REVISION
ANTENNA:		TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 725 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-11	74 (F-4)
ANTENNA LOCATION:			Y: 145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
MODEL SCALE:		MODEL FREQUENCY:	725 MHz
CONFIGURATION:	29		
			E € □ OTHER:
REMARKS:		PLOTTED IN: RELATIVE	
-		TRANSMISSION DISTANC	
		OBSERVER: PN, BM	DATE: 4-18-77

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7			
			(F-4)
ANTENNA LOCATION:			145 MHz
MODEL SCALE:	1/5		725 MHz
MODEL SCALE:			θ= 60°
			φ=
CONFIGURATION:	29	INTEGRATOR COUNT:	
			. 0 □ OTHER:
REMARKS:		PLOTTED IN: RELATIVE de	
		TRANSMISSION DISTANCE	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

		DOCUMENT _	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:_		FULL SCALE FREQUENCY:_	145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
			θ- 85° φ-
CONFIGURATION:	29		
			□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	200 FT
		OBSERVER: PN, BM	DATE: 4-18-//

		REVISION
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 725 MHz
A ALE		
CONFIGURATION:	29	INTEGRATOR COUNT
CONFIGURATION:		POLARIZATION: E
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 145 MH2
MODEL SCALE:	1/5	MODEL ERECLIENCY: 725 MHz
CONFIGURATION:		HTEGRATOR COUNT:
		POLARIZATION: E Ø 🖪 E Ø 🖸 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
*		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (I	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	145 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	725 MHz
CONFIGURATION:			θ- 120° φ-
		POLARIZATION: E Ø E 6	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

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		MEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION	:_FINCAP	FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 725 MHz
CONFIGURATION:		
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

ANTENNA.	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F.4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	
		9 11 11 11 11 11 11 11 11 11 11 11 11 11	θ- φ- - 0°
			9 THER:
REMARKS:		PLOTTED IN: RELATIVE dB	J Official
		TRANSMISSION DISTANCE:	285 FT
			DATE: 4-18-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT : 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 17	4 MHz
MODEL SCALE:		MODEL FREQUENCY: 87	70 MHz
CONFIGURATION			θ- φ- 90°
		POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
TEMATING.		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (I	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	174 MHz
MODEL SCALE:	1/5		
MODEL SCALE:	1/5	MODEL FREQUENCY:	
	20		θ
CONFIGURATION:	2.5	INTEGRATOR COUNT: POLARIZATION: E Ø 🔲 E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	G UINEN:
IILWANKS.		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	174 MHz
		MODEL FREQUENCY:	870 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	870 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E	Ø ■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 F I
-		OBSERVER: PN, BM	DATE: 4-18-77
		TRANSMISSION DISTANCE: OBSERVER: PN, BM	285 FT DATE: 4-18-77

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		HEVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F-	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	
	1/5	MODEL FREQUENCY:	
	29		φ=
CONFIGURATION:	29	INTEGRATOR COUNT:	
REMARKS:		POLARIZATION: E	UIHEH:
NEWANNS:		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	
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		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 174 MHz	
MODEL SCALE:	1/5	MODEL FREQUENCY: 870 MHz	
		θ- φ-	
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E OTHER:	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: 285 FT	
		OBSERVER: PN, BM DATE: 4-18-77	

ANTENNA.	FLYING PROTOTYPE	703-174 (I	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	174 MHz
		MODEL ERECHENCY:	870 MHz
CONFIGURATION:		MODEL FREQUENCY:	θ- 95° φ-
		POLARIZATION: E D E B	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	

		REVISION	
ANTENNA	FLYING PROTOTYPE	TEST IDENT.: 703-174 ((F.4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
	1/5	MODEL EDECLIENCY:	870 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	θ= 100°
CONFIGURATION:	29	INTEGRATOR COUNT:	
			9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
-		OBSERVER: PN, BM	DATE: 4-18-77

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ANTENNA:	FLYING PROTOTYPE		.4)
ANTENNA LOCATION:	FINCAP	TEST IDENT.: 703-174 (F FULL SCALE FREQUENCY:	174 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ- φ- 120°
TEMARKS	,	PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4	4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
		MODEL FREQUENCY:	370 MHz
CONFIGURATION:	29	INTEGRATOR COUNT: POLARIZATION: E Ø □ E Ø PLOTTED IN: RELATIVE dB	θ= 150° φ=
		TRANSMISSION DISTANCE:	285 FT
	· · · · · · · · · · · · · · · · · · ·	OBSERVER: PN, BM	DATE: 4-18-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT 703	3-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUEN	
CONFIGURATION	29		θ- φ- 0°
CONFIGURATION:			■ E # □ OTHER:
DEMARKS			
REMARKS:		PLOTTED IN: RELATIVE	
		TRANSMISSION DISTAN	104
		OBSERVER: PN, BM	M DATE: 4-18-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE		-4)
ANTENNA LOCATION	FINCAP	FULL SCALE FREQUENCY:	
MODEL SCALE:		MODEL FREQUENCY:	
MODEL SCALE:			θ- φ- 90°
CONFIGURATION:	29	INTEGRATOR COUNT: POLARIZATION: E ♥ ■ E ❸	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

		REVISION _	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	174 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	
			θ- 90° φ-
CONFIGURATION:			θ
DEMARKS.		PLOTTED IN: RELATIVE dB	
REMARKS:		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-18-77
		OBSERVER. THE	DATE

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		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 870 MHz
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 70	3-174 (F-4)		
ANTENNA LOCATION:		FULL SCALE FREQUE			
MODEL SCALE:	1/5	MODEL FREQUENCY:			
CONFIGURATION:		INTEGRATOR COUNT		θ	60°
		POLARIZATION: E Ø	■ E 0 □	OTHER:	
REMARKS:		PLOTTED IN: RELATIV			
		TRANSMISSION DISTA	NCE:	285 FT	
		OBSERVER: PN, E	BM	_ DATE:	4-18-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:1	74 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:8	70 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 8	θ- 85°
CONFIGURATION:	29	INTEGRATOR COUNT:	
DEMARKS		POLARIZATION: E Ø E Ø	OTHER:
HEMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77
		UBSERVER: THE	DATE: 4 10-77

		DOCUMENT REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	174 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	870 MHz
CONFIGURATION:			θ=95°
CONTIGORATION:		POLARIZATION: E Ø E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
-		TRANSMISSION DISTANCE:	285 FT
-		OBSERVER: PN, BM	DATE: 4-18-77

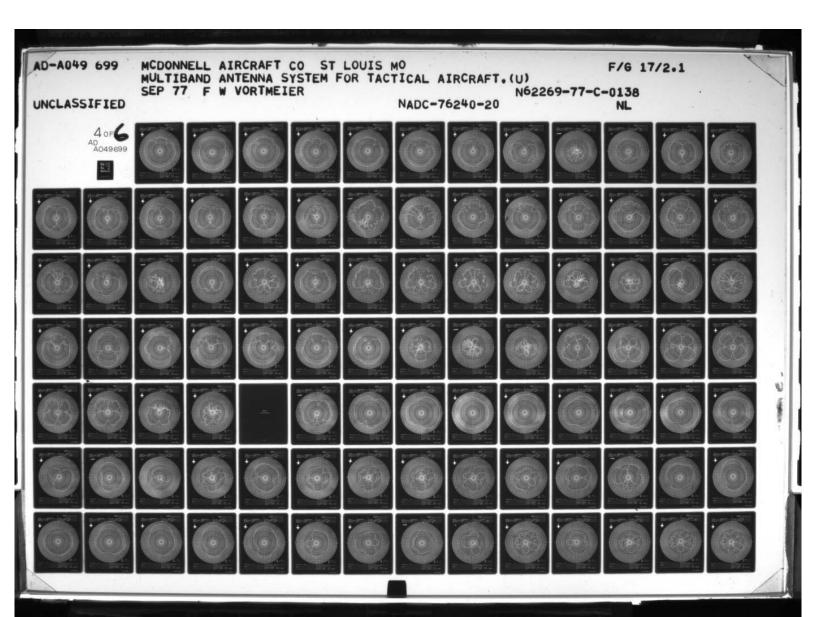
		112 13 10 10	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	174 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	870 MHz
MODEL SCALE:			θ = $\frac{100^{\circ}}{\phi}$ = $\frac{100^{\circ}}{\phi}$
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E P E E	☐ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:_	DATE 4.19.77
		OBSERVER:PN, BM	DATE: 4-10-//

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:		MODEL FREQUENCY: 870 MHz
CONFIGURATION:		
COM TOURNING.		POLARIZATION: E P E E D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TEMATING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77
		UBSERVER: DATE: 4-10-77

		REVISION
ANTENNA.	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 174 MHz
	1/5	MODEL EREQUENCY: 870 MHz
MODEL SCALE:		MODEL FREQUENCY: 870 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E P E E O OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 4-18-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:		MODEL FREQUENCY: 1125 MHz
CONFIGURATION:		
		POLARIZATION: E P E OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77
		DATE.

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1125 MHz
MODEL SCALE:		θ- φ- 90°
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77



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ANTENNA: FLYING PROTOTYPE	TEST IDENT.:	703-174 (F	4)	
ANTENNA LOCATION: FINCAP	 FULL SCALE FE	REQUENCY:	225 MHz	
MODEL SCALE: 1/5	MODEL FREQU	ENCY:	1125 MHz	
		ENCY:	θ	90°
CONFIGURATION: 29	INTEGRATOR C			
			OTHER:	
REMARKS:	 PLOTTED IN: R			
	 TRANSMISSION	DISTANCE:	285 FT	
	 OBSERVER:	PN, BM	DATE:	4-18-77

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		DOCUMENT _ REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	225 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	
			θ- 30° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
DEMANUS.			• OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE: _ OBSERVER:PN, BM	DATE 4-18-77
		UBSERVER: FIV, BIVI	DATE: 4-10-77

		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	225 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1125 MHz
CONFIGURATION:			θ- 60° φ-
		POLARIZATION: E O E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-18-77

		REVISION	
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)	
		FULL SCALE FREQUENCY: 225 MHz	
ANTENNA LOCATION: MODEL SCALE:	FINCAP 1/5	MODEL FREQUENCY:	
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E O D E O OTHER	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: 285 FT	
		OBSERVER: PN, BM DATE	4-18-77

		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	225 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1125 MHz
			θ = 95° φ =
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	• OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 57
		TRANSMISSION DISTANCE:	285 F I
-		OBSERVER: PN, BM	DATE: 4-18-77

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	EL VINC PROTOTYPE	702 474 45 44
ANTENNA:	FLYING PROTOTYPE FINCAP	TEST IDENT.: 703-174 (F-4) FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:	1/5	
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🗖 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-18-77
		DATE:

		-	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	225 MHz
		MODEL FREQUENCY:	1125 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	## 120° ## 120° ## 120° ## 120°
CONFIGURATION:	29	INTEGRATOR COUNT	
CONFIGURATION:		POLARIZATION: E D E 6	
REMARKS:		PLOTTED IN: RELATIVE dB	O THE H
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: _4-18-77
		OUCLITY EIT.	DATE:

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	225 MHz
MODEL SCALE:		MODEL FREQUENCY:	1125 MHz
A COLOR SCALE:			θ = $\frac{150^{\circ}}{\phi}$ =
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	280 F1
		OBSERVER: PN, BM	DATE: <u>4-18-77</u>

		DOCUMENT _	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 ((F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:		MODEL FREQUENCY:	
			θ- φ- ο ^c
CONFIGURATION:			N.D. OTUGO
DEMARKS.			OTHER:
HEMARKS:			285 FT
		TRANSMISSION DISTANCE:	20071
		OBSERVER: PN, BM	DATE: 4-15-77

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	225 MHz
	1/5	MODEL EREQUENCY	1125 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1125 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:	φ =
		POLARIZATION: E Ø E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-15-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	225 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1125 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ= 90° φ=
		POLARIZATION: E Ø E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	Jiiiii.
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE 4-15-77
		ODSERVER.	UATE

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1125 MHz
MODEL SCALE:		
CONFICURATION	29	INTEGRATOR COUNT:
CONFIGURATION:		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-15-77

		DOCUMENT REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT: 703-174 (I	F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	225 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1125 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ = $\frac{60^{\circ}}{\phi}$ =
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
			DATE: 4-19-77

		REVISION
		THE VISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:_		FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:		MODEL FREQUENCY: 1125 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-15-77

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 225 M	//Hz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1125 M	1Hz
MODEL SCALE:			9= 95° p=
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø O	THER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: 28	95 FT
		OBSERVER: PN, BM	DATE: 4-15-77

	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:_	225 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1125 MHz
			θ- 100° φ-
CONFIGURATION:	29		
		POLARIZATION: E Ø E	9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	280 F1
		OBSERVER: PN, BM	DATE: 4-15-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	225 MHz
	1/5		1125 MHz
MODEL SCALE:			θ- 120° φ-
CONFIGURATION:	23	INTEGRATOR COUNT:	
			OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-15-77

ANTENNA:	FLYING PROTOTYPE		4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	225 MHz
	1/5	MODEL ERECUENCY:	1125 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ- 150° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-15-77

		DOCUMENT REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
		MODEL ERECUENCY:	1625 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ- φ- - 0°
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:

		REVISION
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
CONTIGURATION:		POLARIZATION: E Ø 🗆 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-19-77
		DATE: TOTAL

		DOCUMENT _ REVISION _	
ANTENNA	FLYING PROTOTYPE	TEST IDENT.: 703-174	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
MODEL COLE	1/5	MODEL EREQUENCY.	1625 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ- 90° φ-
CONFIGURATION:	23	INTEGRATOR COUNT:	
		POLARIZATION: E Ø D E	9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 57
		TRANSMISSION DISTANCE:	285 F I
		OBSERVER: PN, BM	DATE: 4-19-77

		-	
ANTENNA:		TEST IDENT.: 703-174	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	1625 MHz
			θ- 30° φ-
CONFIGURATION:	29		
		POLARIZATION: E Ø 🗆 E	θ
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-19-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/5	MODEL FREQUENCY:	
CONFIGURATION:			θ- 60° φ-
REMARKS:			UTHER:
HEMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE 4-19-77
		OBSERVER: 111, DI	UAIE.

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	325 MHz
		MODEL FREQUENCY:	1625 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ= 85°
00N51611B45151	29	INTEGRATOR COUNT	
CONFIGURATION:		INTEGRATOR COUNT:POLARIZATION: E ♥ □ E €	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	

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		hev	/TSION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:	703-174 (F-4)	
ANTENNA LOCATION:		FULL SCALE FREC		
MODEL SCALE:		MODEL FREQUEN	CY:1	625 MHz
			THE STATE OF THE S	
<u> </u>				
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10 313	25 130 130	X III	25 20	12 10 5 0
			FI	
	2			
				********* ***************************
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Y				
			HHATT	θ= 95°
			Hittin	d =
				Ψ-
CONFIGURATION:	29	INTEGRATOR COU	NT:	
		POLARIZATION: E	φ 🗆 E θ 🖲	OTHER:
REMARKS:		PLOTTED IN: RELA	ATIVE dB	
		TRANSMISSION DIS	STANCE:	285 FT
		OBSERVER: PI	N, BM	DATE: 4-19-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
CONFIGURATION:		θ- 100° φ-
		POLARIZATION: E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE:

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:
		MODEL FREQUENCY:
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🖲 OTHER:
		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE:

		DOCUMENT _ REVISION _	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
	1/5	MODEL FREQUENCY:	1625 MHz
CONFIGURATION:		MODEL FREQUENCY:	θ- 150° φ-
			0 THER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-19-77
		ODSERVER.	UMIE

	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:		MODEL FREQUENCY:	1625 MHz
		MODEL FREQUENCY:	0
	29		φ =
CONFIGURATION:	23	INTEGRATOR COUNT:	
REMARKS:		POLARIZATION: E Ø E Ø PLOTTED IN: RELATIVE dB	U OTHER:
newanks:		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-19-77
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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
CONFIGURATION:		
		POLARIZATION: E P E D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TOWATTO.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-19-77
		DATE:

		REVISION
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
		Ø-
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 4-19-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE:

		DOCUMENT _ REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 ((F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	1625 MHz
MODEL SCALE:		MODEL FREQUENCY:	0- 60° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗷 E 6	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 70	3-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUE	NCY:3:	25 MHz
MODEL SCALE:	4 /F	MODEL FREQUENCY:	16:	25 MHz
MODEL SCALE:				θ- 85° φ-
CONFIGURATION:	29			
				OTHER:
REMARKS:		PLOTTED IN: RELATI		285 FT
		TRANSMISSION DISTA	ANCE:	DATE A 19.77
		OBSERVER:PN,	DIVI	_ DATE: 4-19-77

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		MEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:		MODEL FREQUENCY: 1625 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-19-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	325 MHz
		MODEL EREQUENCY:	1625 MHz
CONFIGURATION:		MODEL FREQUENCY:	θ = $\frac{100^{\circ}}{\phi}$ =
			OTHER:
REMARKS		PLOTTED IN: RELATIVE dB	_ OTHER
TEMANNS.		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 4-19-77
		OBSERVER: THE BIN	DATE: 4-13-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-19-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 1625 MHz
		θ - $\frac{150^{\circ}}{\phi}$ - $\frac{150^{\circ}}{\phi}$
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-19-77

		DOCUMENT REVISION	
ANTENNA:	FLYING PROTOTYPE		4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:		MODEL FREQUENCY:	
CONFIGURATION:			θ- φ- 0°
CONFIGURATION:		POLARIZATION: E $\phi \square E \theta$	
REMARKS:		PLOTTED IN: RELATIVE dB	UINEN
newanno		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77

		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	400 MHz
	1/5		
MODEL SCALE:	1/5	MODEL FREQUENCY:	
CONFIGURATION:		INTEGRATOR COUNT:	• OTHER:
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77

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		HEVISION _	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	400 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	2000 1411
CONFIGURATION:			θ- φ- - 90°
CONTROUMATION.			9 OTHER:
REMARKS		PLOTTED IN: RELATIVE dB	
nemanks:		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-20-77
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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	400 MHz
MODEL SCALE:	1/5	MODEL ERECLIENCY	2000 MHz
CONFIGURATION:			θ = $\frac{30^{\circ}}{\phi}$
CO.W. TOURA HOW.		POLARIZATION: E O E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
			DATE: 4-20-77

ANTENNA:	FLYING PROTOTYPE	- 703-174	(F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
	1/5	MODEL FREQUENCY:	2000 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- 60° φ-
REMARKS:		PLOTTED IN: RELATIVE dB	
newarks:		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-20-77
		OUGEN VEN.	DATE:

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
		FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 2000 MHz
ANTENNA LOCATION: MODEL SCALE:	1/5	MODEL FREQUENCY: 2000 MHz

V		
		θ -
CONFIGURATION:	29	INTEGRATOR COUNT:
-		POLARIZATION: E Ø 🗖 E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 4-20-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: _ 400) MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 2000	0 MHz
			θ- 95° φ-
CONFIGURATION:		INTEGRATOR COUNT:	
DEMARKS.		POLARIZATION: E Ø D E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77
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	EL VINC RECTOTVE	702 174 (5.4)
ANTENNA:	FINCAP	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:_ MODEL SCALE:	1/5	FULL SCALE FREQUENCY: 400 MHz MODEL FREQUENCY: 2000 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

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	EL VINC BROTOTYPE	-	
ANTENNA LOCATION:	FLYING PROTOTYPE	TEST IDENT .: 703-174 (400 MHz
	1/5	FULL SCALE FREQUENCY:_	
MODEL SCALE:		MODEL FREQUENCY:	θ= 120°
CONFIGURATION:	29	INTEGRATOR COUNT:	φ
		POLARIZATION: E Ø D E	
REMARKS:		PLOTTED IN: RELATIVE dB	J. 111211.
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	
		Objenven.	DATE

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	400 MHz
	1/5	MODEL EREQUENCY:	
MODEL SCALE:		MODEL FREQUENCY:	
CONFIGURATION:	29	INTEGRATOR COUNT:	φ
		POLARIZATION: E D E B	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:400 MHz
MODEL SCALE:	1/5	MODEL EREQUENCY: 2000 MHz
SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø E O OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
	The state of the s	TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

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		HEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 2000 MHz
CONFIGURATION:		
CONTROURATION.		POLARIZATION: E P E E OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 2000 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 2000 MHz
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø B EØ D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (I	F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	
MODEL SCALE:	1/5	MODEL FREQUENCY:	
			θ- 30° φ
CONFIGURATION:	23	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø	U OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	200 F1
		OBSERVER: PN, BM	DATE: 4-20-77

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		REVISION
ANTENNA	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 400 MHz
	1/5	MODEL FREQUENCY: 2000 MHz
MODEL SCALE:		
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗵 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-22-77

		_	
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	2000 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:	2000 WH2
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0 15			20 15 10 5

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V			
			θ- 85°
			φ=
CONFIGURATION:	29	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗷 E 6	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
-		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-20-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 2000 MHz
		θ- 95° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY:
		θ- 100° φ-
CONFIGURATION:	29	INTEGRATOR COUNT:
DEMARKS:		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
HEMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77
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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:		MODEL FREQUENCY: 2000 MHz
CONFIGURATION:		
2323		POLARIZATION: E P E OTHER:
REMARKS		PLOTTED IN: RELATIVE dB
TIENTATING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-4)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	1/5	MODEL FREQUENCY: 2000 MHz
MODEL SCALE:		MODEL FREQUENCY: 2000 MINE Property of the control
CONFIGURATION:	29	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖭 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-20-77

APPENDIX C

F-18 ANTENNA PATTERNS

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 120 MHz
CONFIGURATION:		INTEGRATOR COUNT: POLARIZATION: E Ø □ E Ø ② OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 5-1-77

			REVISION		
ANTENNA:	FLYING PROTOTYPE	TEST IDENT :-	703-174 (F-1	8)	
ANTENNA LOCATION:	FINCAP	FULL SCALE F	REQUENCY:	30 MHz	
MODEL SCALE:	1/4	MODEL FREQU	ENCY:120 M	Hz	
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				θ =	90°
				φ	90
CONFIGURATION:	30		COUNT:		
			N: E Ø 🗆 E Ø 🛭	OTHER:_	
REMARKS:		PLOTTED IN: F		205 5-	
		TRANSMISSION	N DISTANCE:		5-1-77
		OBSERVER:	PN, BM	DATE: _	5-1-//

		RE	VISION		
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:	703-174 (F-1	8)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FRE	QUENCY:	30 MHz	
MODEL SCALE:	1/4	MODEL EREQUE	NCY: 120 MH	·lz	
CONFIGURATION:				θ	
55.11 .5511A 1 1014					
DEMARKS.		POLARIZATION:		OTHER:	
REMARKS:		PLOTTED IN: REL		285 FT	
		TRANSMISSION D			5-1-77
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ANTENNA: ANTENNA LOCATION: MODEL SCALE:	FLYING PROTOTYPE FINCAP		REVISION		
ANTENNA LOCATION:	FINCAP		703-174 (F-1)	8)	
MODEL SCALE:		FULL SCALE E	REQUENCY:	30 MHz	
MODEL SCALE:	1/4	FULL SCALE F	JENCY: 120 MI	Hz	
				θ	30°
CONFIGURATION: 3	30		COUNT:		
			N: E Ø □ E Ø ©	OTHER:	
REMARKS:		PLOTTED IN: R			
		TRANSMISSION	DISTANCE:		
		OBSERVER:	PN, BM	DATE:	5-1-77

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		HEVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 120 M	Hz
CONFIGURATION:		MODEL FREQUENCY: 120 M	θ- 60° φ-
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
			DATE:5-1-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 120 MHz
CONFIGURATION:		POLARIZATION: E P D E OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 5-1-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 120	MHz
CONFIGURATION:			θ- φ- 95°
		POLARIZATION: E D E B	
DEMARKS		PLOTTED IN: RELATIVE dB	UITILIT.
newanks:		TRANSMISSION DISTANCE:	285 FT
	*	OBSERVER: PN, BM	DATE 5-1-77
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	EL VINC BROTOTVES	702 174 /5 1/	2)
ANTENNA:	FINCAP	TEST IDENT.: 703-174 (F-18 FULL SCALE FREQUENCY: 3	0 MHz
ANTENNA LOCATION:	1/4	120 MH	7
MODEL SCALE:	1/4	MODEL FREQUENCY: 120 MH	12
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00NF10110 1 T1011	30	INTEGRATOR COUNT	
CONFIGURATION:	30	INTEGRATOR COUNT:	OTUED.
		POLARIZATION: E Ø D E Ø	UTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:5-1-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	30 MHz
MODEL SCALE	1/4	MODEL ERECUENCY: 120 M	IHz
CONFIGURATION:		MODEL FREQUENCY: 120 M	θ- φ-
		POLARIZATION: E Ø D E Ø	
REMARKS		PLOTTED IN: RELATIVE dB	
TIEWATING.		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:5-1-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	120 MHz
CONFIGURATION		INTEGRATOR COUNT:	θ • OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE	285 FT
		TRANSMISSION DISTANCE:	DATE 5-1-77

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	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 120 MHz
		30 - 25 - 20 - 15 - 10
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		θ-
		00
		4
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 5-1-77

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		_	
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
MODEL COALS	1/4	120	0 MHz
ANTENNA LOCATION: MODEL SCALE:	FINCAP	FULL SCALE FREQUENCY:120	30 MHz
*			θ- φ- 90°
CONFIGURATION:	30		
DEMARKS		POLARIZATION: E Ø E 6	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:_	285 FT
		OBSERVER PN, BM	
			DATE: 5-1-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT :	703-174 (F-18)	
ANTENNA LOCATION:					
MODEL SCALE:	1/4	MODEL FREQUE	NCY: 120 MI	Hz	
CONFIGURATION:				θ	
CONFIGURATION:		POLARIZATION:			
REMARKS:		PLOTTED IN: REL		OTHER:	
NEWIANNO.		TRANSMISSION D		285 FT	
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 120 MHz
CONFIGURATION:		
CONFIGURATION:		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 5-1-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION	FINCAP	FULL SCALE FREQUENCY: 30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 120 MHz
CONFIGURATION		
CONTINUINATION.		POLARIZATION: E P E E OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER PN, BM DATE 5-1-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:_	703.174 (F	.18)	
ANTENNA LOCATION:		FULL SCALE FE	BEOLIENCY:	30 MHz	
MODEL SCALE:	1/4	MODEL ERECL	ENCY: 120) MHz	
CONFIGURATION:		MODEL FREQUE		θ	85°
CONFIGURATION:		POLARIZATION			
REMARKS:		PLOTTED IN: RE		U OTHER:	
nemanno:		TRANSMISSION		285 FT	
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			EVISION		
	FLYING PROTOTYPE	TEST IDENT.:	703-174 (F-18	3) 20 MHz	
ANTENNA LOCATION:	1/A	FULL SCALE FRI	EQUENCY:	AH ₂	
MODEL SCALE:	1/4	MODEL FREQUE	NCY:	IIIZ	
					95°
CONFIGURATION:	30	INTEGRATOR CO	DUNT:		
CONFIGURATION:		POLARIZATION:			
REMARKS:		PLOTTED IN: RE	LATIVE dB		
		TRANSMISSION	DISTANCE:	285 FT	
		OBSERVER:	PN, BM	DATE	5-1-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 120 MHz
MODEL SCALE:		MODEL FREQUENCY: 120 MHz P- 100° P- 100° P- 100°
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø @ E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 5-1-77

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	FLYING PROTOTYPE	TEST IDENT.:	703-174 (F-18	30 MH-	
ANTENNA LOCATION:	1/A	FULL SCALE FREC	DUENCY:	ALL-	
MODEL SCALE:	174	MODEL FREQUEN	CY:	IHZ	
MODEL SCALE:	1/4	MODEL FREQUEN	120 N	Hz	
				θ- φ-	120°
CONFIGURATION:	30	INTEGRATOR COU			
		POLARIZATION: E		OTHER:	
REMARKS:		PLOTTED IN: RELA		285 FT	
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY	30 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:1	20 MHz
CONFIGURATION:			θ = 150° φ =
		· · · · · · · · · · · · · · · · · · ·	. 0 □ OTHER:
REMARKS:		PLOTTED IN: RELATIVE de	
		TRANSMISSION DISTANCE	
		OBSERVER: PN, BM	DATE: 5-1-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)		
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz		
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz		
MODEL SCALE:				
CONFIGURATION:	30	INTEGRATOR COUNT:		
DEMARKS		POLARIZATION: E Ø E Ø THER:		
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT		
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		OBSERVER: PN, BM DATE: 4-29-77		

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL COALE	1/4	FULL SCALE FREQUENCY:
MODEL SCALE:		MODEL FREQUENCY: 168 MHz

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ONEIGURATION	30	INTEGRATOR COUNT.
ONFIGURATION:		POLARIZATION: E Ø 🔲 E Ø 🖸 OTHER:
EMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	4 / 4	MODEL FREQUENCY: 168 MHz
MODEL SCALE:		
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz
MODEL SCALE:		MODEL FREQUENCY:
SINFIGURATION	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🖲 OTHER:
EMARKS		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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	EL MANO RECTOTACE	702 174 (E 19)
ANTENNA:		
		MODEL EREQUENCY: 168 MHz
ANTENNA LOCATION: MODEL SCALE:	FINCAP	FULL SCALE FREQUENCY:168 MHz
	30	WITTER A TOR COUNT
CONFIGURATION:	30	POLARIZATION: E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TICHATINO.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:		MODEL FREQUENCY: 168 MHz
CONFIGURATION:		
		POLARIZATION: E P D OTHER:
REMARKS.		PLOTTED IN: RELATIVE dB
newanks:		TRANSMISSION DISTANCE:
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz
MODEL SCALE:		
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🖭 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:		TEST IDENT.: 703-174 (F-18	42.444=
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	42 MHZ
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 M	nz
MODEL SCALE:			θ- φ- 100°
CONFIGURATION:	30	INTEGRATOR COUNT:	
CONFIGURATION:		POLARIZATION: E # D E #	
REMARKS:		PLOTTED IN: RELATIVE dB	
The state of the s		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-29-77
		0002117 211.	

		REVISION
	FLYING PROTOTYPE	700 474 (5 40)
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	1/4	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:		MODEL FREQUENCY: 168 MHz
MODEL SCALE:		
CONFIGURATION:	30	INTEGRATOR COUNT
CONFIGURATION:		POLARIZATION: E Ø D E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TEMPINO.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		DATE.

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz
		θ- φ-
CONFIGURATION:		INTEGRATOR COUNT:
551115116		POLARIZATION: E Ø 🔲 E Ø 📵 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT OBSERVER: PN, BM DATE: 4-29-77
		OBSERVER: PN, BM DATE: 4-29-77

		REVISION
ANTENNA :	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz
CONFIGURATION:	30	
CONFIGURATION:		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

ANTENNA	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	40 4411
MODEL SCALE:	1/4	MODEL FREQUENCY:	160 MU-
			θ- φ- 90°
CONFIGURATION:	30	INTEGRATOR COUNT: POLARIZATION: E Ø @ E Ø □	
REMARKS:		PLOTTED IN: RELATIVE dB	
		The modern bloth mode.	285 FT
		OBSERVER: PN, BM	_ DATE:4-29-77

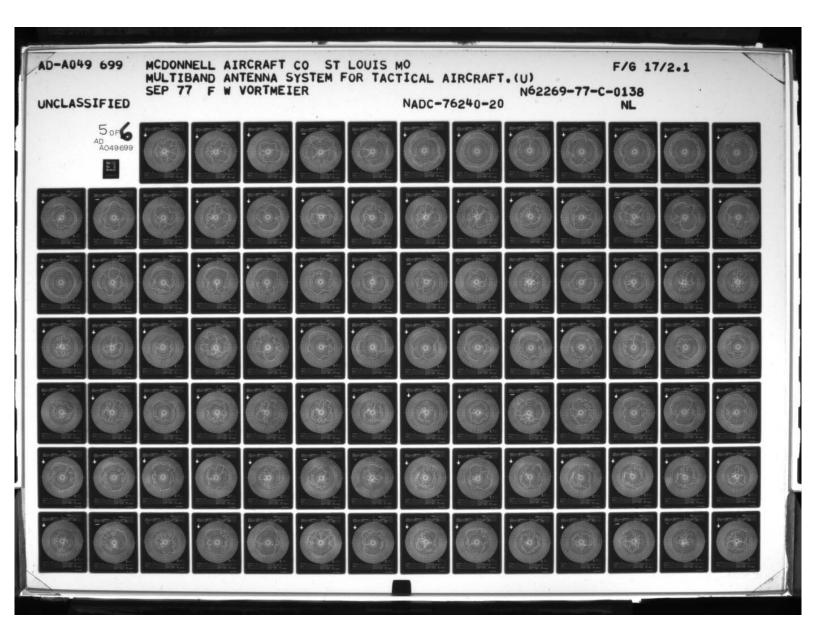
		DOCU REVIS	MENT		
	EL VINC BROTOTVE		02 174 (5 19)		
		TEST IDENT.: 7 FULL SCALE FREQU	5NOV: 4	12 MHz	
ANTENNA LOCATION:	4/4	FULL SCALE FREQU	168 MI		
CONFIGURATION:		IN EGRATOR COUNT			900
CONTROLLATION.		POLARIZATION: E Ø		OTHER:	
REMARKS:		PLOTTED IN: RELAT		OTHER:	
newanks:		TRANSMISSION DIST		285 FT	
		OBSERVER: PN,	BM	DATE	4-29-17
		OBSERVER:		_ UATE: _	

		REVISION
ANTENNA.	FLYING PROTOTYPE	702 174 (E 19)
ANTENNA LOCATION:		TEST IDENT.: 703-174 (F-18)
		MODEL ERECUENCY: 168 MHz
MODEL SCALE:	1/4	FULL SCALE FREQUENCY: 42 MHz MODEL FREQUENCY: 168 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

ANTENNA:FL ANTENNA LOCATION:FIN MODEL SCALE:1/4	NCAP	TEST IDENT.: 703-17 FULL SCALE FREQUENCY	. 42 MHz
ANTENNA LOCATION: FILM MODEL SCALE: 1/4	NCAP	FULL SCALE FREQUENCY	. 42 MHz
ANTENNA LOCATION: FILM MODEL SCALE: 1/4	NCAP	FULL SCALE FREQUENCY	. 42 MHz
MODEL SCALE:1/4			400 1411
			168 MHz
			θ- 60° φ-
CONFIGURATION: 30		INTEGRATOR COUNT:	Ε θ
REMARKS:		PLOTTED IN: RELATIVE d	
		TRANSMISSION DISTANCE	
		OBSERVER: PN, BM	DATE: 4-29-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz
		θ- φ-
CONFIGURATION:	30	INTEGRATOR COUNT:
SEMARKS.		POLARIZATION: E Ø 📵 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz
CONFIGURATION:		DINTEGRATOR COUNT:
		POLARIZATION: E P B E D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77



		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz
CONFIGURATION:		MODEL FREQUENCY: 100 miles 100° 1
CONTROLLATION.		POLARIZATION: E Ø @ E Ø OTHER:
DEMARKS		PLOTTED IN: RELATIVE dB
HEMARKS:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER PN, BM DATE 4-29-77
		OBSERVER: PN, BM DATE: 4-29-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 168 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø C OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		THAT SMISSION DISTANCE:

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:_	FINCAP	FULL SCALE FREQUENCY: 42 MHz
MODEL SCALE:	1/4	MODEL EREQUENCY: 168 MHz
CONFIGURATION:		NTEGRATOR COUNT:
7544 BVC		POLARIZATION: E Ø 📵 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz	
	4 / 4	MODEL EREQUENCY: 304 MHz	
MODEL SCALE:	1/4	MODEL FREQUENCY: 304 MHz	
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E # D OTHER:	
REMARKS:		PLOTTED IN: RELATIVE dB	
1		TRANSMISSION DISTANCE: 285 FT	
		OBSERVER: PN, BM DATE: 4-29-7	7

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/4	MODEL EREQUENCY. 304 MHz
MODEL SCALE:		
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 304 MHz
A COLE:		θ
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	76 MHz
MODEL SCALE:		MODEL FREQUENCY:	304 MHz
			θ- 30° φ-
CONFIGURATION:	30	INTEGRATOR COUNT:	
REMARKS:		POLARIZATION: E ♥ □ E Ø ■ C	THER:
LWANNS.		TRANSMISSION DISTANCE: 28	35 FT
		OBSERVER: PN, BM	

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:304 MHz
		θ- φ-
CONFIGURATION:	30	INTEGRATOR COUNT:
DEMARKS	,	POLARIZATION: E ♥ □ E ♥ □ OTHER:PLOTTED IN: RELATIVE dB
REMARKS:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/4	MODEL FREQUENCY:	004 1411
CONFIGURATION	30	INTEGRATOR COUNT:	θ= 85° φ=
CONFIGURATION:		POLARIZATION: E # D E #	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:4-29-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT :_ 703-174	4 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY	
MODEL SCALE:	1/4	MODEL FREQUENCY:	304 MHz
			θ- φ- 95°
CONFIGURATION:	30	INTEGRATOR COUNT:	
			€ 0 OTHER:
REMARKS:		PLOTTED IN: RELATIVE de	And the same of the same
		TRANSMISSION DISTANCE	: 285 FT
		OBSERVER: PN, BM	DATE: 4-29-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	76 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 304 N	1Hz
CONFIGURATION:		MODEL FREQUENCY 304 N	θ = $\frac{100^{\circ}}{\phi}$ =
		POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
TEMATING.		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-29-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	3)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	76 MHz
	• 1 •	MODEL FREQUENCY:	304 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	304 MHz 00 00 00 00 00 00 00 00 00
001151011515151	30	INTEGRATOR COUNT	
CONFIGURATION:	30	INTEGRATOR COUNT:POLARIZATION: E Ø 🔲 E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
			DATE:4-29-77

ANTENNA: FLYING PROTOTYPE TEST IDENT.: 703-174 FULL SCALE FREQUENCY: MODEL FREQUENCY: MODEL FREQUENCY: 25	: 76 MHz
ANTENNA LOCATION: FINCAP MODEL SCALE: 1/4 MODEL FREQUENCY: MODEL FREQUEN	: 76 MHz
MODEL SCALE: 1/4 MODEL FREQUENCY:	
	θ = 150° φ =
REMARKS: PLOTTED IN: RELATIVE OR	lk e
TRANSMISSION DISTANCE	285 FT
ORSERVER: PN. BM	DATE: 4-29-77

		DOCUMENT
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 304 MHz
CONF. GURATION:		
55141 5511A 1 1014		POLARIZATION: E P E B C OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
newarks:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
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		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL COALS	1/4	304 MHz
MODEL SCALE:		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E P E D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	76 MHz
	4 / 4	MODEL EREQUENCY:	304 MHz
MODEL SCALE:			θ- φ-
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø @ E 6	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 57
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE: 4-29-77

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	70 1411
MODEL SCALE:	1/4	MODEL FREQUENCY:	004.4411
			θ- φ-
CONFIGURATION:	30	INTEGRATOR COUNT:POLARIZATION: E Ø 📵 E Ø [
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: OBSERVER:PN, BM	
		COCCOVED PN. BM	DATE:4-29-77

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 304 MHz
CONFIGURATION:		
CONFIGURATION:		
		POLARIZATION: E Ø 🖸 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/4	MODEL ERECLIENCY: 304 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:
DEMARKS.		POLARIZATION: E Ø 📵 E Ø 🗆 OTHER:
nemanns:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		OBSERVER DATE

ANTENNA: FLYING PROTOTYPE ANTENNA LOCATION: FINCAP MODEL SCALE: 1/4 TEST IDENT.: 703.174 (F-18) FULL SCALE FREQUENCY: 304 MHz	1Hz
ANTENNA LOCATION: FINCAP MODEL SCALE: 1/4 MODEL FREQUENCY: 304 MHz	ЛНZ
MODEL SCALE:	
CONFIGURATION: 30 INTEGRATOR COUNT:) =
POLARIZATION: E ♥ ■ E ੳ □ OT	HER:
REMARKS: PLOTTED IN: RELATIVE dB	FT
TRANSMISSION DISTANCE: 285	
OBSERVER: PN, BM	ATE: 4-29-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	76 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	
ONFIGURATION	30		
ONFIGURATION:		POLARIZATION: E P E C OT	
EMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:285	FT
		OBSERVER: PN, BM	ATE: 4-29-77

FINCAP 1/4	TEST IDENT.: 703-174 (F-18) FULL SCALE FREQUENCY: 76 MHz MODEL FREQUENCY: 304 MHz
FINCAP 1/4	FULL SCALE FREQUENCY: 76 MHz MODEL FREQUENCY: 304 MHz
1/4	MODEL FREQUENCY: 304 MHz
	LWODELTHEAGENGT
30	
	POLARIZATION: E Ø @ E Ø O OTHER:
	PLOTTED IN: RELATIVE dB
	TRANSMISSION DISTANCE: 285 FT
	OBSERVER: PN, BM DATE: 4-29-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 76 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 304 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 304 MHz HODEL FREQUENCY: 3
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø @ E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		REVISION
	FLYING PROTOTYPE	703.174 (F.18)
ANTENNA:		TEST IDENT.: 703-174 (F-18) FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL ERECLIENCY: 416 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:
REMARKS:		POLARIZATION: E Ø 🔲 E Ø 📵 OTHER:
HEMAHKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		DATE:DATE:

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
		MODEL FREQUENCY: 416 MHz
MODEL SCALE:	1/4	
		θ- φ-
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🖸 E Ø 💿 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
CONFIGURATION		
CONFIGURATION:		POLARIZATION: E Ø D E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		DOCUMENT REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	404 4411
MODEL SCALE:	1/4	MODEL FREQUENCY:	440 4411-
CONFIGURATION:	30		θ- 30° φ-
		POLARIZATION: E P E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		THAIRDINISSION DISTANCE.	85 FT
		OBSERVER: PN, BM	DATE: 4-29-77

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		HEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
MODEL SCALE:		MODEL FREQUENCY: 416 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	416 MHz
			9- 85° 0-
CONFIGURATION:	30	POLARIZATION: E D E O O	THER:
REMARKS:		PLOTTED IN: RELATIVE dB	5 FT
		TRANSMISSION DISTANCE: 28 OBSERVER: PN, BM	DATE: 4-29-77
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	104 MHz
	4 /4	MODEL FREQUENCY:	416 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:	θ- φ-
			DATE: 4-29-77
		OBSERVER: FIN, BIVI	UATE: 4-23-11

		REVISION
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL EREQUENCY: 416 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	()
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	404 4411
MODEL SCALE:	1/4	MODEL FREQUENCY:	440 4411
CONFIGURATION			θ- 120° φ-
		POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
			DATE:4-29-77

		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
CONFIGURATION:		
00.0.70011211014		POLARIZATION: E D E D OTHER:
REMARKS		PLOTTED IN: RELATIVE dB
HEMARKS:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		DATE: 420 77

		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
MODEL SCALE:		MODEL FREQUENCY: 416 MHz HODEL FREQUENCY: 4
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 4-29-77

		REVISION	
	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F-18))
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 10	14 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MH	2
MODEL SCALE:		MODEL FREQUENCY:	
0 6 10 15	25 30 3	25 20	15 10 5 0

V			

W			
			θ=
			d =
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗵 E Ø 🗆	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
			DATE:4-29-77

ANTENNA:FLYING PROTOTYPE TEST IDENT.:703-174 (F-18) ANTENNA LOCATION: FINCAP FULL SCALE FREQUENCY:104 MHz MODEL SCALE:1/4 MODEL FREQUENCY:416 MHz	
MODEL SCALE: Total	
MODEL SCALE: Total	
MODEL SCALE: 1/4 MODEL FREQUENCY: 416 MHz	
CONFIGURATION: 30 INTEGRATOR COUNT:	
POLARIZATION: E P E O OTHER:	
REMARKS: PLOTTED IN: RELATIVE dB	
TRANSMISSION DISTANCE: 285 FT	
OBSERVER: PN, BM DATE: 4	1-29-77

		REVISION
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
CONFIGURATION:		
		POLARIZATION: E P E D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
HEWARKS:		TRANSMISSION DISTANCE:285 FT
		THATOMISSION DISTANCE.
		OBSERVER: PN, BM DATE: 4-29-77

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		DOCUMENT
		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
MODEL SCALE:		MODEL FREQUENCY: 416 MHz
CONFIGURATION:		POLARIZATION: E Ø E Ø D OTHER:
DEMARKS		PLOTTED IN: RELATIVE dB
REMARKS:		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		UATE: 123.7

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ANTENNA:		TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
MODEL SCALE:		MODEL FREQUENCY: 416 MH2
CONFIGURATION:	30	INTEGRATOR COUNT:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		DATE.

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	(8)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	404 4411
MODEL SCALE:	• 1 •	MODEL FREQUENCY:	416 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- φ-
		POLARIZATION: E Ø E & [
REMARKS:		PLOTTED IN: RELATIVE dB	,
		TRANSMISSION DISTANCE:	

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		HEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
CONFIGURATION:	30	HINTEGRATOR COUNT:
CONFIGURATION:		POLARIZATION: E Ø D E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TEMATING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		DATE:

		REVISION
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP 1/A	FULL SCALE FREQUENCY: 104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 416 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:		TEST IDENT.: 703-174 (F	-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	104 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	416 MHz
			θ= 150° φ=
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø	U OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 ET
***************************************		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
	1/4	MODEL FREQUENCY:	580 MHz
MODEL SCALE:			θ- φ- 0°
CONFIGURATION:	30	INTEGRATOR COUNT:	
D5114 D140		POLARIZATION: E Ø D E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 ET
		TRANSMISSION DISTANCE:	40077
		OBSERVER: PN, BM	DATE: 4-29-77

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	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F-	18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	580 MHz
A CONTRACTOR OF THE CONTRACTOR			θ- φ- - 90°
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø D E Ø	• OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 ET
		TRANSMISSION DISTANCE:	4 20 77
		OBSERVER: PN, BM	DATE: 4-29-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	580 MHz
CONFIGURATION			θ- 90° φ-
CONTROLLATION.		POLARIZATION: E O E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
THE WATER STATE OF THE STATE OF		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE 4-29-77
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 580 MHz
CONFIGURATION:		
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	145 MU
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	145 MHZ
MODEL SCALE:	1/4	MODEL FREQUENCY:	580 MHz
			XXXXXX
	2		

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			θ- 60°
			d =
			•
ONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø D E Ø	■ OTHER:
EMARKS:		PLOTTED IN: RELATIVE dB	
EMARKS:		TRANSMISSION DISTANCE:	285 FT DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:		MODEL FREQUENCY: 580 MHz
CONFIGURATION:		HINTEGRATOR COUNT:
		POLARIZATION: E Ø 🗖 E Ø 🗑 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F·18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	580 MHz
CONFIGURATION			θ- 95° φ-
CONTIGORATION.		INTEGRATOR COUNT: POLARIZATION: E Ø □ E 6	
REMARKS:		PLOTTED IN: RELATIVE dB	- E UIHER:
NEWANNS:		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: _4-29-77
		UDSERVER: TIV, DIVI	DATE: 4-23-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	580 MHz
MODEL SCALE:		MODEL FREQUENCY:	θ= 100° φ=
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: _4-29-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
	4 /4	MODEL ERECUENCY:	580 MHz
CONFIGURATION:		MODEL FREQUENCY:	θ- 120° φ-
		POLARIZATION: E Ø D E Ø	
REMARKS:			
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/4	MODEL EDECLIENCY. 580 MHz
CONFIGURATION:		
		POLARIZATION: E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	580 MHz
			θ- φ- 0°
CONFIGURATION:	30	INTEGRATOR COUNT:POLARIZATION: E Ø 🕒 E Ø (
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-29-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	580 MHz
MODEL SCALE:		MODEL FREQUENCY:	90°
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗷 E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:_	285 FT
		OBSERVER: PN, BM	DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F-	18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	580 MHz
A COLE SCALE			θ
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🖪 E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	285 F I
		OBSERVER:PN, BM	DATE: 4-29-77

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	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 580 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 580 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		UATE: 12077

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:_		FULL SCALE FREQUENCY: 145 MHz	
		MODEL FREQUENCY: 580 MHz	
MODEL SCALE:	1/4	MODEL FREQUENCY: 580 MHz	
		θ- φ-	85°
CONFIGURATION:	30		
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:.	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: 285 FT	
		OBSERVER: PN, BM DATE:	

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/4	MODEL EREQUENCY: 580 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER:PN, BMDATE:4-29-77
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 580 MHz
CONFIGURATION		HITEGRATOR COUNT:
		POLARIZATION: E Ø 🖪 E Ø 🗆 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 145 MHz	
MODEL SCALE:	1/4	MODEL FREQUENCY: 580 MHz	
CONFIGURATION:			1200
CONFIGURATION.		POLARIZATION: E D E D OTHER:	
REMARKS:		PLOTTED IN: RELATIVE dB	
TEMPATINO.		TRANSMISSION DISTANCE: 285 FT	
		OBSERVER: PN, BM DATE:	4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 145 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 580 MHz
		θ- 150° φ-
CONFIGURATION:		POLARIZATION: E P E D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TEMATING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F	-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	696 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	696 MHz
			θ=
	30		
CONFIGURATION:	30	INTEGRATOR COUNT:	
DEMA DVC		POLARIZATION: E # E #	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
			DATE: 4-29-77

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	FL VINC PROTOTYCE	700 171 (5.10)	
ANTENNA:ANTENNA LOCATION:.		TEST IDENT.: 703-174 (F-18)	
	4.14	FULL SCALE FREQUENCY: 174 MHz MODEL FREQUENCY: 696 MHz	
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz	
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🖸 OTHER:	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: 285 FT	
		OBSERVER: PN, BM DATE: 4-29	.17

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
		θ- 90° φ-
CONFIGURATION:		INTEGRATOR COUNT:
REMARKS:		POLARIZATION: E ♥ □ E ♥ ■ OTHER:PLOTTED IN: RELATIVE dB
newanks		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		DAIL.

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	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
	4.14	TOLE SOMEET THE GOETHOT.
ANTENNA LOCATION:	1/4	FULL SCALE FREQUENCY: 174 MHz MODEL FREQUENCY: 696 MHz
ONFIGURATION:		θ= 30° φ= INTEGRATOR COUNT: POLARIZATION: ΕΦ □ Εθ □ OTHER: PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		THAT SMISSION BISTAITEE
		OBSERVER: PN, BM DATE: 4-29-77

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		TEST IDENT.:
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
		θ60°
CONFIGURATION:		INTEGRATOR COUNT:
TEMARKS.		POLARIZATION: E # D OTHER:
EMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		THANSMISSION DISTANCE:

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		TEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
CONFIGURATION:	30	
25.11 10011A 11014.		POLARIZATION: E Ø 🗆 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT : 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
		θ- 95° φ-
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🖪 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/4	MODEL FREQUENCY:	
00051010101	30	INTEGRATOR COUNT	φ =
CONFIGURATION:		INTEGRATOR COUNT:POLARIZATION: E Ø 🛛 E Ø 🖪	
REMARKS:		PLOTTED IN: RELATIVE dB	J OTHER
newanks:		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE:4-29-77
		UBSERVER: 114, DIVI	DATE: 42377

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION	FINCAP	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	
ANTENNA LOCATION MODEL SCALE:	FINCAP 1/4	FULL SCALE FREQUENCY: 174 MHz 696 MHz HODEL FREQUENCY: 696 MHz HODEL
CONFIGURATION:	30	INTEGRATOR COUNT:
CONTROLLATION.		POLARIZATION: E Ø 🔲 E Ø 🖲 OTHER:
REMARKS		
NEWANNS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
CONFIGURATION		
CONTIGUNATION:		POLARIZATION: E Ø 🔲 E Ø 🖲 OTHER:
DE111 DVC		PLOTTED IN: RELATIVE dB
HEMARKS:		TRANSMISSION DISTANCE: 285 FT

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
newants.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		DATE: 42011

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		TEVISION
		TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
MODEL SCALE:		
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER:PN, BM DATE:4-29-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	696 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- 90° φ-
		POLARIZATION: E Ø E E	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-29-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
MODEL SCALE:	1/4	MODEL FREQUENCY:	
CONFIGURATION:			θ- 30° φ-
ONFIGURATION:			
		POLARIZATION: E Ø E Ø	U OTHER:
TEMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	285 FT
		I HANSMISSION DISTANCE:	20011

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (I	F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:_	
MODEL SCALE:	1/4	MODEL FREQUENCY:	
CONFIGURATION:			θ- 60° φ-
		POLARIZATION: E DE E	
DEMARKS.			U UINER:
HEMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:_	4 20 77
		OBSERVER: PN, BM	DATE: 4-29-77

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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	
CONFIGURATION:		INTEGRATOR COUNT:	θ- φ-
		POLARIZATION: E ϕ \bullet E θ	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
:		OBSERVER: PN, BM	DATE: 4-29-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
CONFIGURATION:		
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE:285 FT
		OBSERVER: PN, BM DATE: 4-29-77

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL EREQUENCY: 696 MHz
CONFIGURATION:		HINTEGRATOR COUNT:
		POLARIZATION: E Ø B E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F	:-18)
ANTENNA LOCATION	: FINCAP	FULL SCALE FREQUENCY:	174 MHz
MODEL SCALE:	1/4	MODEL ERECLIENCY:	
CONFIGURATION:			θ- 120° φ-
		POLARIZATION: E Ø E Ø	□ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: OBSERVER:PN, BM	285 FT

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ANTENNA:		
ANTENNA LOCATION:	4.14	FULL SCALE FREQUENCY: 174 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 696 MHz
		θ150°
CONFIGURATION:	30	POLARIZATION: E Ø E Ø OTHER:
		PLOTTED IN: RELATIVE dB
REMARKS		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-29-77
		DATE.

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		MEVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION		FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 900 MHz
CONFIGURATION:		MODEL FREQUENCY: 900 MHz
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:	1/4	
MODEL SCALE:		
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🖸 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT : 703-174 (F	(-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
MODEL SCALE:	1/4	MODEL EREQUENCY:	
MODEL SCALE:		MODEL FREQUENCY:	θ- 90° φ-
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗆 E Ø	• OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	1/4	MODEL FREQUENCY:	
CONFIGURATION:	30	MODEL FREQUENCY: INTEGRATOR COUNT: POLARIZATION: E Ø □ E Ø	900 MHz
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:4-28-77

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	ELVING BROTOTVOE	
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18) FULL SCALE FREQUENCY: 225 MHz
ANTENNA LOCATION:	1/4	
CONFIGURATION:		MODEL FREQUENCY: 900 MHz Particle And Andrew Counts INTEGRATOR COUNTS Particle Andrew Cou
CONTIGURATION:		POLARIZATION: E Ø D E Ø D OTHER:
REMARKS		PLOTTED IN: RELATIVE dB
TEMANNS:		TRANSMISSION DISTANCE: 285 FT
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		DOCUMENT
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 900 MHz
CONFIGURATION:	30	
		POLARIZATION: E Ø 🖸 E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

		DOCUMENT REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:_	FINCAP	FULL SCALE FREQUENCY:	25 MHz
MODEL SCALE:	4 / 4	MODEL FREQUENCY: 90	00 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- 95° φ-
		POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	ornen.
TEWATING.		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	

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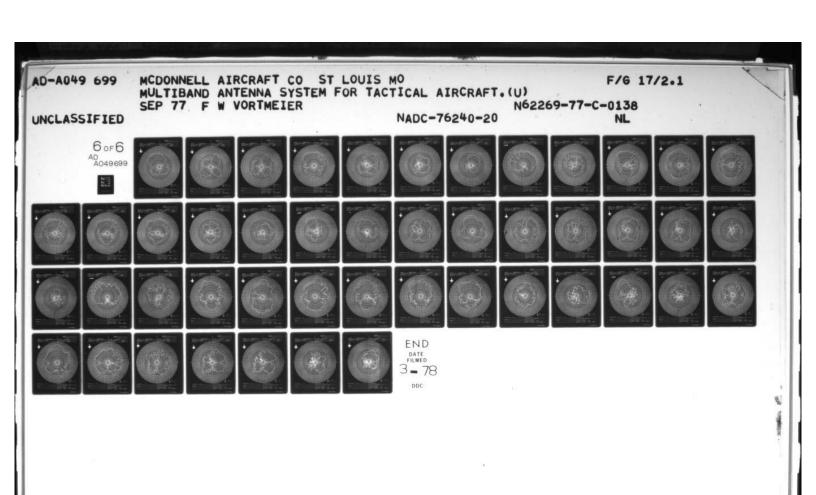
		NEVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
MODEL SCALE:	1/4	MODEL FREQUENCY:	900 MHz
CONFIGURATION:	30	INTEGRATOR COUNT: POLARIZATION: E Ø □ E Ø E PLOTTED IN: RELATIVE dB	900 MHz
		TRANSMISSION DISTANCE:	
		OBSERVER:PN, BM	DATE:4-28-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:	4 14	MODEL FREQUENCY: 900 MHz
CONFIGURATION	30	HITEGRATOR COUNT
		POLARIZATION: E Ø 🗆 E Ø 🖲 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

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ANITENINA	FLYING PROTOTYPE		
ANTENNA LOCATION:		TEST IDENT.: 703-174 (F- FULL SCALE FREQUENCY:	225 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	900 MHz
			θ- φ- 0°
CONFIGURATION:		INTEGRATOR COUNT: POLARIZATION: E ϕ \bullet E θ	
REMARKS:		PLOTTED IN: RELATIVE dB	J OTHER:
newanks:		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: _4-28-77
		ODSERVER.	DAIL

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	18)
ANTENNA LOCATION:_		FULL SCALE FREQUENCY:	225 MHz
MODEL SCALE:	1/4	MODEL EREQUENCY:	900 MHz
MODEL SCALE:		MODEL FREQUENCY:	900 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø	J OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-28-77

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	702 174 (5 10)
	TEST IDENT.: 703-174 (F-18)
1/A	FULL SCALE FREQUENCY: 225 MHz MODEL FREQUENCY: 900 MHz
	θ- 90° φ-
30	INTEGRATOR COUNT:
	POLARIZATION: E Ø E Ø OTHER:
	PLOTTED IN: RELATIVE dB
	TRANSMISSION DISTANCE: 285 FT
	FINCAP 1/4



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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE	1/4	
MODEL SCALE:		θ
CONFIGURATION:	30	POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

		DOCUMENT
	FLYING PROTOTYPE	
ANTENNA LOCATION	FINCAP	FULL SCALE FREQUENCY: 225 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 900 MHz
CONFIGURATION:		INTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
TEMATING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 225 MHz
MODEL COLLE	1/4	POLL SCALE FREQUENCY: 900 MHz
MODEL SCALE:		MODEL FREQUENCY: 900 MHz
		θ- 85° φ-
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø B E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77
		OBSERVER: PN, BM DATE: 4-28-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	225 MHz
	4.14	MODEL ERECUENCY.	900 MHz
MODEL SCALE:	4.14	MODEL FREQUENCY:	900 MHz
CONFIGURATION:		INTEGRATOR COUNT:	9 OTHER:

		REVISION _	
	EL VINC BROTOTYPE	702 174	/F 18\
ANTENNA:ANTENNA LOCATION:			(F-18)
MODEL SCALE:	1/4	FULL SCALE FREQUENCY:	900 MHz
			θ- 100° φ-
CONFIGURATION:	30		9 OTHER:
REMARKS		PLOTTED IN: RELATIVE dB	7 Ш UIHER:
newanks		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-28-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	225 MHz
MODEL SCALE:	4 / 4	MODEL FREQUENCY:	000 1111-
CONFIGURATION:		INTEGRATOR COUNT:	120°
		POLARIZATION: E Ø E E O	
REMARKS:		PLOTTED IN: RELATIVE dB	ET
		TRANSMISSION DISTANCE:	4 22
		OBSERVER: PN, BM	ATE 4-28-//

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	OOF MILL
MODEL SCALE:	4 14	MODEL FREQUENCY:	000 1411
		INTEGRATOR COUNT	θ- φ-
CONFIGURATION:		POLARIZATION: E Ø E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
			DATE: 4-28-77

ANTENNA:FLYII	NG PROTOTYPE	TEST IDENT.:.		(F-18)	
ANTENNA LOCATION:		FULL SCALE	FREQUENCY:	325 MHz	
MODEL SCALE:	1/4	MODEL FREQ	UENCY:	1300 MHz	
CONFIGURATION:				θ- φ- - 0°	
CONFIGURATION:				∂	_
DEMARKS				U DIHER:	_
REMARKS:		PLOTTED IN: F		285 FT	
		TRANSMISSIO	N DISTANCE:.	200 1 1	
		OBSERVER:		DATE: 4-28-77	_

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:		MODEL FREQUENCY: 1300 MHz
CONFIGURATION:		θ- φ- 90° INTEGRATOR COUNT: POLARIZATION: Ε Φ □ Ε Θ Ο OTHER: POLARIZATION: ΘΕΙ ΑΤΙΜΕ «ΒΕΙ ΑΤΙΜΕ «ΒΕΙ ΑΤΙΜΕ» «
IEMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

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		DOCUMENT			
		RE	VISION		
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:	703-174 (F-18	3)	
ANTENNA LOCATION:		FULL SCALE FRE		221	5 MHz
MODEL SCALE:	4 / 4	MODEL FREQUEN		1200) MHz
				θ	90°
CONFIGURATION:		INTEGRATOR COL POLARIZATION: E			
REMARKS:		PLOTTED IN: RELA		OTHER.	
TEMANO.		TRANSMISSION DI		285 FT	
		OBSERVER: P	N, BM	DATE	4-28-77
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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	3)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	
			θ- φ-
CONFIGURATION:	30	INTEGRATOR COUNT:POLARIZATION: E Ø 🖸 E Ø 🖲	
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
			DATE:4-28-77

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		REVISION _	
ANTENNA	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F·18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
		MODEL ERECLIENCY:	1300 MHz
CONFIGURATION		MODEL FREQUENCY:	θ- 60° φ-
CONFIGURATION.			θ ■ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
NEWIANNS.		TRANSMISSION DISTANCE:	****
			DATE: 4-28-77
		UDSERVER: TIV, DIVI	UATE:

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ANTENNA:FLYING PROTOTYPE ANTENNA LOCATION: _FINCAP MODEL SCALE:	
MODEL SCALE: SCALE FREQUENCY: 325 MHz 1/4 MODEL FREQUENCY: 1300 MHz 1300 MHz	
MODEL SCALE: SCALE FREQUENCY: 325 MHz 1/4 MODEL FREQUENCY: 1300 MHz 1300 MHz	
MODEL SCALE: 1/4 MODEL FREQUENCY: 1300 MHz	
CONFIGURATION: 30 INTEGRATOR COUNT:	
POLARIZATION: E ♥ □ E ● OTHER: PLOTTED IN: RELATIVE dB	
TRANSMISSION DISTANCE: 285 FT OBSERVER PN, BM DATE: 4-28	-77
OBSERVER DATE: 4-26	

		DOCUMENT		
		REVISION		
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)		
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	22E MU-	
MODEL SCALE:	1/4	MODEL FREQUENCY:	1200 MH-	
CONFIGURATION:			θ- φ-	
		POLARIZATION: E Ø D E Ø		
REMARKS:		PLOTTED IN: RELATIVE dB		
		TRANSMISSION DISTANCE:	285 FT	
			DATE:4-28-77	

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT : 703-174 (F-1	B)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	005 1411
MODEL SCALE:	1/4	MODEL FREQUENCY:	1000 1411
CONFIGURATION:			θ- φ- 100°
CONTROLLATION.		POLARIZATION: E O E E	
REMARKS:		PLOTTED IN: RELATIVE dB	
TEMANKS.		TRANSMISSION DISTANCE:	285 FT
			DATE: 4-28-77
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		DOCUMENT _ REVISION _	
ANTENNA:	FLYING PROTOTYPE	- 703·174	(F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
		MODEL ERECLIENCY:	1300 MHz
MODEL SCALE:			θ- 120° φ-
CONFIGURATION:			
DE144 DVC			9 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	20E ET
		TRANSMISSION DISTANCE:	285 F I
)————		OBSERVER: PN, BM	DATE: 4-28-77

		DOCUMENT REVISION _	
ANTENNA	FLYING PROTOTYPE	TEST IDENT.: 703-174	
ANTENNA LOCATION:_	FINCAP	FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:		MODEL FREQUENCY:	1300 MHz
CONFIGURATION:			θ- 150° φ-
55.11.15511A1161V			€ OTHER:
DEMARKS.		PLOTTED IN: RELATIVE dB	
HEMAHKS:		TRANSMISSION DISTANCE:	
		THANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE 4-28-77

ANTENNA:	FLYING PROTOTYPE		8)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	005 1411
MODEL SCALE:	4 / 4	MODEL FREQUENCY:	1000 1111
	30		θ- φ- 0°
CONFIGURATION:		INTEGRATOR COUNT:	
DEMARKS		POLARIZATION: E Ø E Ø E	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:4-28-77

		DOCUMENT	
		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	325 MHz
	1/4	MODEL ERECLIENCY:	1000 1111-
MODEL SCALE:	1/4	MODEL FREQUENCY:	1000 1111-
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø OT	HER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: 285	FT
		OBSERVER: PN, BM	ATE: 4-28-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	005 1411
MODEL SCALE:	1/4	MODEL FREQUENCY:	4000 4411
			θ- φ-
CONFIGURATION:		INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🖸 E Ø 🗆	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
			205 57
		TRANSMISSION DISTANCE: OBSERVER:PN, BM	285 FT DATE: 4-28-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 1300 MHz
CONFIGURATION:		HINTEGRATOR COUNT:
		POLARIZATION: E Ø E Ø D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

		REVISION
	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 1300 MHz
CONFIGURATION:		HITEGRATOR COUNT:
		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

		DOCUMENT
		REVISION
ANTENNA:	FI YING PROTOTYPE	703-174 (F-18)
ANTENNA:		TEST IDENT.: 703-174 (F-18) FULL SCALE FREQUENCY: 325 MHz
	4 / 4	MODEL ERECUENCY: 1300 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 1300 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:
CONTROLLATION.		POLARIZATION: E Ø E Ø OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
HEWATING.		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:_		FULL SCALE FREQUENCY:	325 MHz
	4.14	MODEL FREQUENCY:	1300 MHz
MODEL SCALE:		MODEL FREQUENCY:	95°
ONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E P E E O	
EMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE: 28	5 FT
		OBSERVER: PN, BM	DATE: 4-28-77

		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	1300 MHz
CONFIGURATION	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø 🗵 E Ø 🗆 OT	HER:
EMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:285	FT
		OBSERVER: PN, BM D	ATE 4-28-77

		REVISION _	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174	(F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	325 MHz
MODEL SCALE:	1/4	MODEL EBEQUENCY.	1300 MHz
CONFIGURATION:			θ- 120° φ
		POLARIZATION: E Ø E	θ □ OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-28-77

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		ne vision
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 325 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 1300 MHz
MODEL SCALE:		
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🗀 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

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	FLYING PROTOTYPE	TEST IDENT .: 703-174 (F-1	400 MH-
ANTENNA LOCATION:	1/4	FULL SCALE FREQUENCY:	
CONFIGURATION:	30	INTEGRATOR COUNT: POLARIZATION: E Ø □ E Ø □ PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	θ- φ-
		OBSERVED PN RM	A-28-77
1		OBSERVER: PN, BM	DATE:4-28-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:
MODEL SCALE:		
CONFIGURATION:	30	integrator count:
REMARKS:		
		THANSMISSION DISTANCE: 20011
CONFIGURATION:		φ=

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	3)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	
MODEL SCALE:	• / •	MODEL FREQUENCY:	4000 4411
CONFIGURATION:			θ- φ- 90°
		POLARIZATION: E Ø D E Ø	
REMARKS:		PLOTTED IN: RELATIVE dB	O.111611.
TEMPORE STATE		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-28-77

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ANTENNA ·	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	4.14	MODEL FREQUENCY: 1600 MHz
CONFIGURATION:	30	
		POLARIZATION: E Ø 🗆 E Ø 🖭 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	400 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	1600 MHz
CONFIGURATION:		INTEGRATOR COUNT:	θ- φ-
		POLARIZATION: E Ø 🗆 E Ø 🖲	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		THE THE PERSON OF PROPERTY OF THE PERSON OF	285 FT
		OBSERVER: PN, BM	DATE:4-28-77

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		REVISION
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)
ANTENNA LOCATION:		FULL SCALE FREQUENCY: 400 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY: 1600 MHz
MODEL SCALE:		MODEL FREQUENCY: 1600 MHz Heavy statement of the stateme
CONFIGURATION:	30	INTEGRATOR COUNT:
		POLARIZATION: E Ø 🗆 E Ø 🖭 OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB
		TRANSMISSION DISTANCE: 285 FT
		OBSERVER: PN, BM DATE: 4-28-77

		REVISION	
ANTENNA:		TEST IDENT.: 703-174 (F-	18)
ANTENNA LOCATION:_	FINCAP	FULL SCALE FREQUENCY:	400 MHz
MODEL SCALE:	1/4	MODEL FREQUENCY:	1600 MHz
			θ- φ-
CONFIGURATION:	30	INTEGRATOR COUNT:	
REMARKS:		POLARIZATION: E # E # [OTHER:
IEWANNS:		TRANSMISSION DISTANCE:	285 FT
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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	3)
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	400 4411
MODEL SCALE:	• / •	MODEL FREQUENCY:	4000 1411
CONFIGURATION			θ- 100° φ-
CONFIGURATION:			
DEMARKS		POLARIZATION: E Ø D E Ø D	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	285 FT
		TRANSMISSION DISTANCE:	4 20 77
		OBSERVER: PN, BM	_ DATE:4-28-77

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	FLYING PROTOTYPE	_	
		TEST IDENT.: 703-174 FULL SCALE FREQUENCY:	400 MHz
ANTENNA LOCATION:	4 /4	MODEL FREQUENCY:	1600 MHz
MODEL SCALE:			θ- 120° φ-
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION E Ø D E	θ
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-28-77

		DOCUMENT
ANTENNA:		TEST IDENT.: 703-174 (F-18) 400 MHz
ANTENNA LOCATION:	FINCAP	FULL SCALE PREQUENCY.
MODEL SCALE:		MODEL FREQUENCY: 1600 MHz
		θ- φ- 150°
CONFIGURATION:		INTEGRATOR COUNT:
DE111 DVG		POLARIZATION: E # E OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE: 285 FT
		THATOMISSION DISTANCE:
		OBSERVER: PN, BM DATE: 4-28-77

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ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	3)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	400 MLI-
MODEL SCALE:	1/4	MODEL FREQUENCY:	1600 MHz
CONFIGURATION:	30	INTEGRATOR COUNT: POLARIZATION: E Ø ② E Ø □ PLOTTED IN: RELATIVE dB TRANSMISSION DISTANCE:	θ- φ- 0°
		OBSERVER: PN, BM	DATE: 4-28-77
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		REVISION	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18	3)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	
		MODEL FREQUENCY:	1600 MHz
MODEL SCALE:			θ- φ- 90°
CONFIGURATION:	30	INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:4-28-77

		DOCUMENT	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-18)	
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	400 MHz
MODEL SCALE:	4 / 4	MODEL FREQUENCY:	1600 MHz
CONFIGURATION:	30	INTEGRATOR COUNT:	90° b=
		POLARIZATION: E Ø E Ø D O	THER:
REMARKS:		PLOTTED IN: RELATIVE dB	5 FT
		TRANSMISSION DISTANCE: 28	0ATE 4-28-77
		OBSERVER: PN, BM	DATE: 4-28-77

		REVISION _	
ANTENNA:	FLYING PROTOTYPE	TEST IDENT : 703-174	(F-18)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	400 MHz
MODEL SCALE:	1/4	the state of the s	1600 MHz
	30	INTEGRATOR COUNT:	θ = 30° φ =
		POLARIZATION: E Ø E	9 D OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	305.57
		TRANSMISSION DISTANCE:	285 FT
		OBSERVER: PN, BM	DATE: 4-28-77

		REVISION	
ANTENNA:		TEST IDENT.: 703-174 (F-1	8)
ANTENNA LOCATION:	FINCAP	FULL SCALE FREQUENCY:	AOO MILI-
MODEL SCALE:	4.14	MODEL FREQUENCY:	1000 1111-
			θ- φ-
CONFIGURATION:		INTEGRATOR COUNT:	
		POLARIZATION: E Ø E Ø	OTHER:
REMARKS:		PLOTTED IN: RELATIVE dB	205 ET
		TRANSMISSION DISTANCE:	
		OBSERVER: PN, BM	DATE:4-28-77

DOCUMENT _

ANTENNA: FLYING PROTOTYPE ANTENNA LOCATION: FINCAP MODEL SCALE: 1/4 MODEL FREQUENCY: 400 MHz MODEL FREQUENCY: 1600 MHz	
ANTENNA LOCATION: FINCAP MODEL SCALE: 1/4 FULL SCALE FREQUENCY: 400 MHz MODEL FREQUENCY: 1600 MHz	
MODEL SCALE: 1/4 MODEL FREQUENCY: 1600 MHz	
CONFIGURATION: 30 INTEGRATOR COUNT:	
POLARIZATION: E Φ Θ E Θ OTHER:	
PLOTTED IN: RELATIVE dB	
TRANSMISSION DISTANCE: 285 FT	4 29 77
OBSERVER: PN, BM DATE:	4-28-77

			OCUMENT		
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.:	703-174 (F-1	8)	
ANTENNA LOCATION:		FULL SCALE FF		400	MHz
MODEL SCALE:	1/4	MODEL FREQUE		1600	MHz
CONFIGURATION:		INTEGRATOR C		θ	
		POLARIZATION			
REMARKS		PLOTTED IN: RE			
TEIVIANNS:		TRANSMISSION		285 FT	
		OBSERVER:	PN. BM	DATE: _	4-28-77
		OBSERVER		DATE	

		DOCUMENT		
ANTENNA:	FLYING PROTOTYPE	TEST IDENT.: 703-174 (F-	18)	
ANTENNA LOCATION:		FULL SCALE FREQUENCY:	400 4411-	
MODEL SCALE:			1600 MHz	
CONFIGURATION:	30	INTEGRATOR COUNT:	θ- φ-	
		POLARIZATION: E Ø E Ø		
REMARKS:		PLOTTED IN: RELATIVE dB		
		TRANSMISSION DISTANCE:	285 FT	
			DATE: 4-28-77	

		REVISION		
ANTENNA:	ELVING PROTOTYPE	703 174 (5.19)		
ANTENNA:ANTENNA LOCATION:_		TEST IDENT.: 703-174 (F-18 FULL SCALE FREQUENCY:	400 MU -	
MODEL SCALE:	1/4	MODEL FREQUENCY:	1000 1111-	
			θ- φ-	
CONFIGURATION:	30	INTEGRATOR COUNT:POLARIZATION: E Ø		
REMARKS:		PLOTTED IN: RELATIVE dB	Jilletti.	
CWANNS.		TRANSMISSION DISTANCE:	285 FT	
		OBSERVER: PN, BM		

Hz Hz
Hz
1500